



SEQUENCE LISTING

5 <110> BOEHRINGER INGELHEIM (CANADA) LTD.

<120> SELF REPLICATING RNA MOLECULE FROM
HEPATITIS C VIRUS

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<140> 10/789,355
<141> 2004-02-27

15 <150> 60/257,857
<151> 2000-12-22

<150> 10/029,907
<151> 2001-12-21

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<170> FastSEQ for Windows Version 4.0

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10	tatgggatct	gatctggggc	ctcgggtgcac	atgctttaca	tgtgtttagt	cgaggttaga	1740
	aaacgtctag	gccccccgaa	ccacggggac	gtgggtttcc	tttgaaaaac	acgataatac	1800
	c atg gac	cgg gag atg	gca gca tgc	tgc gga ggc	gcg gtt ttc	gta ggt	1849
	Met Asp Arg	Glu Met Ala	Ala Ala Ser	Cys Gly Gly	Ala Val Phe	Val Gly	
	1	5	10	15			
15	ctg ata ctc	ttg acc ttg	tca ccg cac	tat aag ctg	ttc ctc gct	agg	1897
	Leu Ile Leu	Leu Thr Leu	Ser Pro His	Tyr Lys Leu	Phe Leu Ala	Arg	
		20	25	30			
20	ctc ata tgg	tgg tta caa	tat ttt atc	acc agg gcc	gag gca cac	ttg	1945
	Leu Ile Trp	Trp Leu Gln	Tyr Phe Ile	Thr Arg Ala	Glu Ala His	Leu	
		35	40	45			
25	caa gtg tgg	atc ccc ccc	ctc aac gtt	cgg ggg ggc	cgc gat gcc	gtc	1993
	Gln Val Trp	Ile Pro Pro	Leu Asn Val	Arg Gly Gly	Arg Asp Ala	Val	
		50	55	60			
30	atc ctc ctc	acg tgc gcg	atc cac cca	gag cta atc	ttt acc atc	acc	2041
	Ile Leu Leu	Thr Cys Ala	Ile His Pro	Glu Leu Ile	Phe Thr Ile	Thr	
		65	70	75	80		
35	aaa atc ttg	ctc gcc ata	ctc ggt cca	ctc atg gtg	ctc cag gct	ggt	2089
	Lys Ile Leu	Leu Ala Ile	Leu Gly Pro	Leu Met Val	Leu Gln Ala	Gly	
		85	90	95			
40	ata acc aaa	gtg ccg tac	ttc gtg cgc	gca cac ggg	ctc att cgt	gca	2137
	Ile Thr Lys	Val Pro Tyr	Phe Val Arg	Ala His Gly	Leu Ile Arg	Ala	
		100	105	110			
45	tgc atg ctg	gtg ccg aag	gtt gct ggg	ggt cat tat	gtc caa atg	gct	2185
	Cys Met Leu	Val Arg Lys	Val Ala Gly	Gly His Tyr	Val Gln Met	Ala	
		115	120	125			
50	ctc atg aag	ttg gcc gca	ctg aca ggt	acg tac gtt	tat gac cat	ctc	2233
	Leu Met Lys	Leu Ala Ala	Leu Thr Gly	Thr Tyr Val	Tyr Asp His	Leu	
		130	135	140			
55	acc cca ctg	cgg gac tgg	gcc cac gcg	ggc cta cga	gac ctt gcg	gtg	2281
	Thr Pro Leu	Arg Asp Trp	Ala His Ala	Gly Leu Arg	Asp Leu Ala	Val	
		145	150	155	160		
60	gca gtt gag	ccc gtc gtc	ttc tct gat	atg gag acc	aag gtt atc	acc	2329
	Ala Val Glu	Pro Val Val	Phe Ser Asp	Met Glu Thr	Lys Val Ile	Thr	
		165	170	175			
65	tgg ggg gca	gac acc gcg	gcg tgt ggg	gac atc atc	ttg ggc ctg	ccc	2377
	Trp Gly Ala	Asp Thr Ala	Ala Cys Gly	Asp Ile Ile	Leu Gly Leu	Pro	

	180	185	190	
5	gtc tcc gcc cgc agg ggg agg gag ata cat ctg gga ccg gca gac agc Val Ser Ala Arg Arg Gly Arg Glu Ile His Leu Gly Pro Ala Asp Ser 195 200 205	2425		
10	ctt gaa ggg cag ggg tgg cga ctc ctc gcg cct att acg gcc tac tcc Leu Glu Gly Gln Gly Trp Arg Leu Leu Ala Pro Ile Thr Ala Tyr Ser 210 215 220	2473		
15	caa cag acg cga ggc cta ctt ggc tgc atc atc act agc ctc aca ggc Gln Gln Thr Arg Gly Leu Leu Gly Cys Ile Ile Thr Ser Leu Thr Gly 225 230 235 240	2521		
20	cgg gac agg aac cag gtc gag ggg gag gtc caa gtg gtc tcc acc gca Arg Asp Arg Asn Gln Val Glu Gly Glu Val Gln Val Val Ser Thr Ala 245 250 255	2569		
25	aca caa tct ttc ctg gcg acc tgc gtc aat ggc gtg tgt tgg act gtc Thr Gln Ser Phe Leu Ala Thr Cys Val Asn Gly Val Cys Trp Thr Val 260 265 270	2617		
30	tat cat ggt gcc ggc tca aag acc ctt gcc ggc cca aag ggc cca atc Tyr His Gly Ala Gly Ser Lys Thr Leu Ala Gly Pro Lys Gly Pro Ile 275 280 285	2665		
35	acc caa atg tac acc aat gtg gac cag gac ctc gtc ggc tgg caa gcg Thr Gln Met Tyr Thr Asn Val Asp Gln Asp Leu Val Gly Trp Gln Ala 290 295 300	2713		
40	ccc ccc ggg gcg cgt tcc ttg aca cca tgc acc tgc ggc agc tcg gac Pro Pro Gly Ala Arg Ser Leu Thr Pro Cys Thr Cys Gly Ser Ser Asp 305 310 315 320	2761		
45	ctt tac ttg gtc acg aag cat gcc gat gtc att ccg gtg cgc cgg cgg Leu Tyr Leu Val Thr Lys His Ala Asp Val Ile Pro Val Arg Arg Arg 325 330 335	2809		
50	ggc gac agc agg ggg agc cta ctc tcc ccc cgg ccc gtc tcc tac ttg Gly Asp Ser Arg Gly Ser Leu Leu Ser Pro Arg Pro Val Ser Tyr Leu 340 345 350	2857		
55	aag ggc tct tcg ggc ggt cca ctg ctc tgc ccc tcg ggg cac gct gtg Lys Gly Ser Ser Gly Gly Pro Leu Leu Cys Pro Ser Gly His Ala Val 355 360 365	2905		
60	ggc atc ttt cgg gct gcc gtg tgc acc cga ggg gtt gcg aag gcg gtg Gly Ile Phe Arg Ala Ala Val Cys Thr Arg Gly Val Ala Lys Ala Val 370 375 380	2953		
65	gac ttt gta ccc gtc gag tct atg gaa acc act atg cgg tcc ccg gtc Asp Phe Val Pro Val Glu Ser Met Glu Thr Thr Met Arg Ser Pro Val 385 390 395 400	3001		
70	ttc acg gac aac tcg tcc cct ccg gcc gta ccg cag aca ttc cag gtg Phe Thr Asp Asn Ser Ser Pro Pro Ala Val Pro Gln Thr Phe Gln Val 405 410 415	3049		

	gcc cat cta cac gcc cct act ggt agc ggc aag agc act aag gtg ccg	3097
	Ala His Leu His Ala Pro Thr Gly Ser Gly Lys Ser Thr Lys Val Pro	
	420 425 430	
5		
	gct gcg tat gca gcc caa ggg tat aag gtg ctt gtc ctg aac ccg tcc	3145
	Ala Ala Tyr Ala Ala Gln Gly Tyr Lys Val Leu Val Leu Asn Pro Ser	
	435 440 445	
10		
	gtc gcc gcc acc cta ggt ttc ggg gcg tat atg tct aag gca cat ggt	3193
	Val Ala Ala Thr Leu Gly Phe Gly Ala Tyr Met Ser Lys Ala His Gly	
	450 455 460	
15		
	atc gac cct aac atc aga acc ggg gta agg acc atc acc acg ggt gcc	3241
	Ile Asp Pro Asn Ile Arg Thr Gly Val Arg Thr Ile Thr Thr Gly Ala	
	465 470 475 480	
20		
	ccc atc acg tac tcc acc tat ggc aag ttt ctt gcc gac ggt ggt tgc	3289
	Pro Ile Thr Tyr Ser Thr Tyr Gly Lys Phe Leu Ala Asp Gly Gly Cys	
	485 490 495	
25		
	tct ggg ggc gcc tat gac atc ata ata tgt gat gag tgc cac tca act	3337
	Ser Gly Gly Ala Tyr Asp Ile Ile Ile Cys Asp Glu Cys His Ser Thr	
	500 505 510	
30		
	gac tcg acc act atc ctg ggc atc ggc aca gtc ctg gac caa gcg gag	3385
	Asp Ser Thr Thr Ile Leu Gly Ile Gly Thr Val Leu Asp Gln Ala Glu	
	515 520 525	
35		
	acg gct gga gcg cga ctc gtc gtg ctc gcc acc gct acg cct ccg gga	3433
	Thr Ala Gly Ala Arg Leu Val Val Leu Ala Thr Ala Thr Pro Pro Gly	
	530 535 540	
40		
	tcg gtc acc gtg cca cat cca aac atc gag gag gtg gct ctg tcc agc	3481
	Ser Val Thr Val Pro His Pro Asn Ile Glu Glu Val Ala Leu Ser Ser	
	545 550 555 560	
45		
	act gga gaa atc ccc ttt tat ggc aaa gcc atc ccc atc gag acc atc	3529
	Thr Gly Glu Ile Pro Phe Tyr Gly Lys Ala Ile Pro Ile Glu Thr Ile	
	565 570 575	
50		
	aag ggg ggg agg cac ctc att ttc tgc cat tcc aag aag aaa tgt gat	3577
	Lys Gly Gly Arg His Leu Ile Phe Cys His Ser Lys Lys Lys Cys Asp	
	580 585 590	
55		
	gag ctc gcc gcg aag ctg tcc ggc ctc gga ctc aat gct gta gca tat	3625
	Glu Leu Ala Ala Lys Leu Ser Gly Leu Gly Leu Asn Ala Val Ala Tyr	
	595 600 605	
60		
	tac cgg ggc ctt gat gta tcc gtc ata cca act agc gga gac gtc att	3673
	Tyr Arg Gly Leu Asp Val Ser Val Ile Pro Thr Ser Gly Asp Val Ile	
	610 615 620	
65		
	gtc gta gca acg gac gct cta atg acg ggc ttt acc ggc gat ttc gac	3721
	Val Val Ala Thr Asp Ala Leu Met Thr Gly Phe Thr Gly Asp Phe Asp	
	625 630 635 640	

	tca gtc atc gac tgc aat aca tgt gtc acc cag aca gtc gac ttc agc	3769
	Ser Val Ile Asp Cys Asn Thr Cys Val Thr Gln Thr Val Asp Phe Ser	
	645 650 655	
5	ctg gac ccg acc ttc acc att gag acg acg acc gtc cca caa gac gcg	3817
	Leu Asp Pro Thr Phe Thr Ile Glu Thr Thr Thr Val Pro Gln Asp Ala	
	660 665 670	
10	gtg tca cgc tcg cag cgg cga ggc agg act ggt agg ggc agg atg ggc	3865
	Val Ser Arg Ser Gln Arg Arg Gly Arg Thr Gly Arg Gly Arg Met Gly	
	675 680 685	
15	att tac agg ttt gtg act cca gga gaa cgg ccc tcg ggc atg ttc gat	3913
	Ile Tyr Arg Phe Val Thr Pro Gly Glu Arg Pro Ser Gly Met Phe Asp	
	690 695 700	
20	tcc tcg gtt ctg tgc gag tgc tat gac gcg ggc tgt gct tgg tac gag	3961
	Ser Ser Val Leu Cys Glu Cys Tyr Asp Ala Gly Cys Ala Trp Tyr Glu	
	705 710 715 720	
	ctc acg ccc gcc gag acc tca gtt agg ttg cgg gct tac cta aac aca	4009
	Leu Thr Pro Ala Glu Thr Ser Val Arg Leu Arg Ala Tyr Leu Asn Thr	
	725 730 735	
25	cca ggg ttg ccc gtc tgc cag gac cat ctg gag ttc tgg gag ggc gtc	4057
	Pro Gly Leu Pro Val Cys Gln Asp His Leu Glu Phe Trp Glu Gly Val	
	740 745 750	
30	ttt aca ggc ctc acc cac ata gac gcc cat ttc ttg tcc cag act aag	4105
	Phe Thr Gly Leu Thr His Ile Asp Ala His Phe Leu Ser Gln Thr Lys	
	755 760 765	
35	cag gca gga gac aac ttc ccc tac ctg gta gca tac cag gct acg gtg	4153
	Gln Ala Gly Asp Asn Phe Pro Tyr Leu Val Ala Tyr Gln Ala Thr Val	
	770 775 780	
40	tgc gcc agg gct cag gct cca cct cca tcg tgg gac caa atg tgg aag	4201
	Cys Ala Arg Ala Gln Ala Pro Pro Pro Ser Trp Asp Gln Met Trp Lys	
	785 790 795 800	
	tgt ctc ata cgg cta aag cct acg ctg cac ggg cca acg ccc ctg ctg	4249
	Cys Leu Ile Arg Leu Lys Pro Thr Leu His Gly Pro Thr Pro Leu Leu	
	805 810 815	
45	tat agg ctg gga gcc gtt caa aac gag gtt act acc aca cac ccc ata	4297
	Tyr Arg Leu Gly Ala Val Gln Asn Glu Val Thr Thr Thr His Pro Ile	
	820 825 830	
50	acc aaa tac atc atg gca tgc atg tcg gct gac ctg gag gtc gtc acg	4345
	Thr Lys Tyr Ile Met Ala Cys Met Ser Ala Asp Leu Glu Val Val Thr	
	835 840 845	
55	agc acc tgg gtg ctg gta ggc gga gtc cta gca gct ctg gcc gcg tat	4393
	Ser Thr Trp Val Leu Val Gly Gly Val Leu Ala Ala Leu Ala Ala Tyr	
	850 855 860	
	tgc ctg aca aca ggc agc gtg gtc att gtg ggc agg atc atc ttg tcc	4441

	Cys	Leu	Thr	Thr	Gly	Ser	Val	Val	Ile	Val	Gly	Arg	Ile	Ile	Leu	Ser	
	865					870					875					880	
5	gga	agg	ccg	gcc	atc	att	ccc	gac	agg	gaa	gtc	ctt	tac	cgg	gag	ttc	4489
	Gly	Arg	Pro	Ala	Ile	Ile	Pro	Asp	Arg	Glu	Val	Leu	Tyr	Arg	Glu	Phe	
					885					890					895		
10	gat	gag	atg	gaa	gag	tgc	gcc	tca	cac	ctc	cct	tac	atc	gaa	cag	gga	4537
	Asp	Glu	Met	Glu	Glu	Cys	Ala	Ser	His	Leu	Pro	Tyr	Ile	Glu	Gln	Gly	
				900					905					910			
15	atg	cag	ctc	gcc	gaa	caa	ttc	aaa	cag	aag	gca	atc	ggg	ttg	ctg	caa	4585
	Met	Gln	Leu	Ala	Glu	Gln	Phe	Lys	Gln	Lys	Ala	Ile	Gly	Leu	Leu	Gln	
			915					920					925				
20	aca	gcc	acc	aag	caa	gcg	gag	gct	gct	gct	ccc	gtg	gtg	gaa	tcc	aag	4633
	Thr	Ala	Thr	Lys	Gln	Ala	Glu	Ala	Ala	Ala	Pro	Val	Val	Glu	Ser	Lys	
		930					935				940						
25	tgg	cgg	acc	ctc	gaa	gcc	ttc	tgg	gcg	aag	cat	atg	tgg	aat	ttc	atc	4681
	Trp	Arg	Thr	Leu	Glu	Ala	Phe	Trp	Ala	Lys	His	Met	Trp	Asn	Phe	Ile	
	945					950					955					960	
30	agc	ggg	ata	caa	tat	tta	gca	ggc	ttg	tcc	act	ctg	cct	ggc	aac	ccc	4729
	Ser	Gly	Ile	Gln	Tyr	Leu	Ala	Gly	Leu	Ser	Thr	Leu	Pro	Gly	Asn	Pro	
				965					970						975		
35	gcg	ata	gca	tca	ctg	atg	gca	ttc	aca	gcc	tct	atc	acc	agc	ccg	ctc	4777
	Ala	Ile	Ala	Ser	Leu	Met	Ala	Phe	Thr	Ala	Ser	Ile	Thr	Ser	Pro	Leu	
				980					985					990			
40	acc	acc	caa	cat	acc	ctc	ctg	ttt	aac	atc	ctg	ggg	gga	tgg	gtg	gcc	4825
	Thr	Thr	Gln	His	Thr	Leu	Leu	Phe	Asn	Ile	Leu	Gly	Gly	Trp	Val	Ala	
			995					1000					1005				
45	gcc	caa	ctt	gct	cct	ccc	agc	gct	gct	tcc	gct	ttc	gta	ggc	gcc	ggc	4873
	Ala	Gln	Leu	Ala	Pro	Pro	Ser	Ala	Ala	Ser	Ala	Phe	Val	Gly	Ala	Gly	
		1010					1015					1020					
50	atc	gct	gga	gcg	gct	gtt	ggc	agc	ata	ggc	ctt	ggg	aag	gtg	ctt	gtg	4921
	Ile	Ala	Gly	Ala	Ala	Val	Gly	Ser	Ile	Gly	Leu	Gly	Lys	Val	Leu	Val	
	1025					1030					1035					1040	
55	gat	att	ttg	gca	ggt	tat	gga	gca	ggg	gtg	gca	ggc	gcg	ctc	gtg	gcc	4969
	Asp	Ile	Leu	Ala	Gly	Tyr	Gly	Ala	Gly	Val	Ala	Gly	Ala	Leu	Val	Ala	
				1045					1050						1055		
60	ttt	aag	gtc	atg	agc	ggc	gag	atg	ccc	tcc	acc	gag	gac	ctg	gtt	aac	5017
	Phe	Lys	Val	Met	Ser	Gly	Glu	Met	Pro	Ser	Thr	Glu	Asp	Leu	Val	Asn	
				1060					1065					1070			
65	cta	ctc	cct	gct	atc	ctc	tcc	cct	ggc	gcc	cta	gtc	gtc	ggg	gtc	gtg	5065
	Leu	Leu	Pro	Ala	Ile	Leu	Ser	Pro	Gly	Ala	Leu	Val	Val	Gly	Val	Val	
			1075					1080					1085				
70	tgc	gca	gcg	ata	ctg	cgt	cgg	cac	gtg	ggc	cca	ggg	gag	ggg	gct	gtg	5113
	Cys	Ala	Ala	Ile	Leu	Arg	Arg	His	Val	Gly	Pro	Gly	Glu	Gly	Ala	Val	

	1090	1095	1100	
5	cag tgg atg aac cgg ctg ata gcg ttc gct tcg cgg ggt aac cac gtc Gln Trp Met Asn Arg Leu Ile Ala Phe Ala Ser Arg Gly Asn His Val 1105 1110 1115 1120			5161
10	tcc ccc acg cac tat gtg cct gag agc gac gct gca gca cgt gtc act Ser Pro Thr His Tyr Val Pro Glu Ser Asp Ala Ala Ala Arg Val Thr 1125 1130 1135			5209
15	cag atc ctc tct agt ctt acc atc act cag ctg ctg aag agg ctt cac Gln Ile Leu Ser Ser Leu Thr Ile Thr Gln Leu Leu Lys Arg Leu His 1140 1145 1150			5257
20	cag tgg atc aac gag gac tgc tcc acg cca tgc tcc ggc tcg tgg cta Gln Trp Ile Asn Glu Asp Cys Ser Thr Pro Cys Ser Gly Ser Trp Leu 1155 1160 1165			5305
25	aga gat gtt tgg gat tgg ata tgc acg gtg ttg act gat ttc aag gcc Arg Asp Val Trp Asp Trp Ile Cys Thr Val Leu Thr Asp Phe Lys Ala 1170 1175 1180			5353
30	tgg ctc cag tcc aag ctc ctg ccg cga ttg ccg gga gtc ccc ttc ttc Trp Leu Gln Ser Lys Leu Leu Pro Arg Leu Pro Gly Val Pro Phe Phe 1185 1190 1195 1200			5401
35	tca tgt caa cgt ggg tac aag gga gtc tgg cgg ggc gac ggc atc atg Ser Cys Gln Arg Gly Tyr Lys Gly Val Trp Arg Gly Asp Gly Ile Met 1205 1210 1215			5449
40	caa acc acc tgc cca tgt gga gca cag atc acc gga cat gtg aaa aac Gln Thr Thr Cys Pro Cys Gly Ala Gln Ile Thr Gly His Val Lys Asn 1220 1225 1230			5497
45	tgt tcc atg agg atc gtg ggg cct agg acc tgt agt aac acg tgg cat Cys Ser Met Arg Ile Val Gly Pro Arg Thr Cys Ser Asn Thr Trp His 1235 1240 1245			5545
50	gga aca ttc ccc att aac gcg tac acc acg ggc ccc tgc acg ccc tcc Gly Thr Phe Pro Ile Asn Ala Tyr Thr Thr Gly Pro Cys Thr Pro Ser 1250 1255 1260			5593
55	ccg gcg cca aat tat tct agg gcg ctg tgg cgg gtg gct gct gag gag Pro Ala Pro Asn Tyr Ser Arg Ala Leu Trp Arg Val Ala Ala Glu Glu 1265 1270 1275 1280			5641
60	tac gtg gag gtt acg cga gtg ggg gat ttc cac tac gtg acg ggc atg Tyr Val Glu Val Thr Arg Val Gly Asp Phe His Tyr Val Thr Gly Met 1285 1290 1295			5689
65	acc act gac aac gta aag tgc ccg tgt cag gtt ccg gcc ccc gaa ttc Thr Thr Asp Asn Val Lys Cys Pro Cys Gln Val Pro Ala Pro Glu Phe 1300 1305 1310			5737
70	ttc aca gaa gtg gat ggg gtg cgg ttg cac agg tac gct cca gcg tgc Phe Thr Glu Val Asp Gly Val Arg Leu His Arg Tyr Ala Pro Ala Cys 1315 1320 1325			5785

	aaa ccc ctc cta cgg gag gag gtc aca ttc ctg gtc ggg ctc aat caa	5833
	Lys Pro Leu Leu Arg Glu Glu Val Thr Phe Leu Val Gly Leu Asn Gln	
	1330 1335 1340	
5	tac ctg gtt ggg tca cag ctc cca tgc gag ccc gaa ctg gac gta gca	5881
	Tyr Leu Val Gly Ser Gln Leu Pro Cys Glu Pro Glu Leu Asp Val Ala	
	1345 1350 1355 1360	
10	gtg ctc act tcc atg ctc acc gac ccc tcc cac att acg gcg gag acg	5929
	Val Leu Thr Ser Met Leu Thr Asp Pro Ser His Ile Thr Ala Glu Thr	
	1365 1370 1375	
15	gct aag cgt agg ctg gcc agg gga tct ccc ccc tcc ttg gcc agc tca	5977
	Ala Lys Arg Arg Leu Ala Arg Gly Ser Pro Pro Ser Leu Ala Ser Ser	
	1380 1385 1390	
20	tca gct agc cag ctg tct gcg cct tcc ttg aag gca aca tgc act acc	6025
	Ser Ala Ser Gln Leu Ser Ala Pro Ser Leu Lys Ala Thr Cys Thr Thr	
	1395 1400 1405	
25	cgt cat gac tcc ccg gac gct gac ctc atc gag gcc aac ctc ctg tgg	6073
	Arg His Asp Ser Pro Asp Ala Asp Leu Ile Glu Ala Asn Leu Leu Trp	
	1410 1415 1420	
30	cgg cag gag atg ggc ggg aac atc acc cgc gtg gag tca gaa aat aag	6121
	Arg Gln Glu Met Gly Gly Asn Ile Thr Arg Val Glu Ser Glu Asn Lys	
	1425 1430 1435 1440	
35	gta gta att ttg gac tct ttc gag ccg ctc caa gcg gag gag gat gag	6169
	Val Val Ile Leu Asp Ser Phe Glu Pro Leu Gln Ala Glu Glu Asp Glu	
	1445 1450 1455	
40	agg gaa gta tcc gtt ccg gcg gag atc ctg ccg agg tcc agg aaa ttc	6217
	Arg Glu Val Ser Val Pro Ala Glu Ile Leu Arg Arg Ser Arg Lys Phe	
	1460 1465 1470	
45	cct cga gcg atg ccc ata tgg gca cgc ccg gat tac aac cct cca ctg	6265
	Pro Arg Ala Met Pro Ile Trp Ala Arg Pro Asp Tyr Asn Pro Pro Leu	
	1475 1480 1485	
50	ttg gag tcc tgg aag gac ccg gac tac gtc cct cca gtg gta cac ggg	6313
	Leu Glu Ser Trp Lys Asp Pro Asp Tyr Val Pro Pro Val Val His Gly	
	1490 1495 1500	
55	tgt cca ttg ccg cct gcc aag gcc cct ccg ata cca cct cca cgg agg	6361
	Cys Pro Leu Pro Pro Ala Lys Ala Pro Pro Ile Pro Pro Pro Arg Arg	
	1505 1510 1515 1520	
60	aag agg acg gtt gtc ctg tca gaa tct acc gtg tct tct gcc ttg gcg	6409
	Lys Arg Thr Val Val Leu Ser Glu Ser Thr Val Ser Ser Ala Leu Ala	
	1525 1530 1535	
65	gag ctc gcc aca aag acc ttc ggc agc tcc gaa tcg tcg gcc gtc gac	6457
	Glu Leu Ala Thr Lys Thr Phe Gly Ser Ser Glu Ser Ser Ala Val Asp	
	1540 1545 1550	

	agc ggc acg gca acg gcc tct cct gac cag ccc tcc gac gac ggc gac	6505
	Ser Gly Thr Ala Thr Ala Ser Pro Asp Gln Pro Ser Asp Asp Gly Asp	
	1555 1560 1565	
5	gcg gga tcc gac gtt gag tcg tac tcc tcc atg ccc ccc ctt gag ggg	6553
	Ala Gly Ser Asp Val Glu Ser Tyr Ser Ser Met Pro Pro Leu Glu Gly	
	1570 1575 1580	
10	gag ccg ggg gat ccc gat ctc agc gac ggg tct tgg tct acc gta agc	6601
	Glu Pro Gly Asp Pro Asp Leu Ser Asp Gly Ser Trp Ser Thr Val Ser	
	1585 1590 1595 1600	
15	gag gag gct agt gag gac gtc gtc tgc tgc tcg atg tcc tac aca tgg	6649
	Glu Glu Ala Ser Glu Asp Val Val Cys Cys Ser Met Ser Tyr Thr Trp	
	1605 1610 1615	
20	acg ggc gcc ctg atc acg cca tgc gct gcg gag gaa acc aag ctg ccc	6697
	Thr Gly Ala Leu Ile Thr Pro Cys Ala Ala Glu Glu Thr Lys Leu Pro	
	1620 1625 1630	
	atc aat gca ctg agc aac tct ttg ctc cgt cac cac aac ttg gtc tat	6745
	Ile Asn Ala Leu Ser Asn Ser Leu Leu Arg His His Asn Leu Val Tyr	
	1635 1640 1645	
25	gct aca aca tct cgc agc gca agc ctg cgg cag aag aag gtc acc ttt	6793
	Ala Thr Thr Ser Arg Ser Ala Ser Leu Arg Gln Lys Lys Val Thr Phe	
	1650 1655 1660	
30	gac aga ctg cag gtc ctg gac gac cac tac cgg gac gtg ctc aag gag	6841
	Asp Arg Leu Gln Val Leu Asp Asp His Tyr Arg Asp Val Leu Lys Glu	
	1665 1670 1675 1680	
35	atg aag gcg aag gcg tcc aca gtt aag gct aaa ctt cta tcc gtg gag	6889
	Met Lys Ala Lys Ala Ser Thr Val Lys Ala Lys Leu Leu Ser Val Glu	
	1685 1690 1695	
40	gaa gcc tgt aag ctg acg ccc cca cat tcg gcc aga tct aaa ttt ggc	6937
	Glu Ala Cys Lys Leu Thr Pro Pro His Ser Ala Arg Ser Lys Phe Gly	
	1700 1705 1710	
	tat ggg gca aag gac gtc cgg aac cta tcc agc aag gcc gtt aac cac	6985
	Tyr Gly Ala Lys Asp Val Arg Asn Leu Ser Ser Lys Ala Val Asn His	
	1715 1720 1725	
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	Val Arg Val Cys Glu Lys Met Ala Leu Tyr Asp Val Val Ser Thr Leu	
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	Ile	Leu	Leu	Thr	Cys	Ala	Ile	His	Pro	Glu	Leu	Ile	Phe	Thr	Ile	Thr
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			275					280					285			
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	Leu	Tyr	Leu	Val	Thr	Arg	His	Ala	Asp	Val	Ile	Pro	Val	Arg	Arg	Arg
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			275					280					285				
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	Thr	Gln	Met	Tyr	Thr	Asn	Val	Asp	Gln	Asp	Leu	Val	Gly	Trp	Gln	Ala	
		290					295					300					
45	ccc	ccc	ggg	gcg	cgt	tcc	ttg	aca	cca	tgc	acc	tgc	ggc	agc	tcg	gac	2761
	Pro	Pro	Gly	Ala	Arg	Ser	Leu	Thr	Pro	Cys	Thr	Cys	Gly	Ser	Ser	Asp	
	305					310					315					320	
50	ctt	tac	ttg	gtc	acg	agg	cat	gcc	gat	gtc	att	ccg	gtg	cgc	cgg	cgg	2809
	Leu	Tyr	Leu	Val	Thr	Arg	His	Ala	Asp	Val	Ile	Pro	Val	Arg	Arg	Arg	
					325					330					335		
55	ggc	gac	ggc	agg	ggg	agc	cta	ctc	tcc	ccc	agg	ccc	gtc	tcc	tac	ttg	2857
	Gly	Asp	Gly	Arg	Gly	Ser	Leu	Leu	Ser	Pro	Arg	Pro	Val	Ser	Tyr	Leu	
				340					345					350			
60	aag	ggc	tct	tcg	ggc	ggt	cca	ctg	ctc	tgc	ccc	tcg	ggg	cac	gct	gtg	2905
	Lys	Gly	Ser	Ser	Gly	Gly	Pro	Leu	Leu	Cys	Pro	Ser	Gly	His	Ala	Val	
			355					360					365				
65	ggc	atc	ttt	cgg	gct	gcc	gtg	tgc	acc	cga	ggg	gtt	gcg	aag	gcg	gtg	2953
	Gly	Ile	Phe	Arg	Ala	Ala	Val	Cys	Thr	Arg	Gly	Val	Ala	Lys	Ala	Val	
		370					375					380					
70	gac	ttt	gta	ccc	gtc	gag	tct	atg	gga	acc	act	atg	cgg	tcc	ccg	gtc	3001
	Asp	Phe	Val	Pro	Val	Glu	Ser	Met	Gly	Thr	Thr	Met	Arg	Ser	Pro	Val	

	385		390		395		400	
5	ttc acg gac aac tcg tcc cct ccg gcc gta ccg cag aca ttc cag gtg							3049
	Phe Thr Asp Asn Ser Ser Pro Pro Ala Val Pro Gln Thr Phe Gln Val							
		405			410		415	
10	gcc cat cta cac gcc cct act ggt agc ggc aag agc act aag gtg ccg							3097
	Ala His Leu His Ala Pro Thr Gly Ser Gly Lys Ser Thr Lys Val Pro							
		420			425		430	
15	gct gcg tat gca gcc caa ggg tat aag gtg ctt gtc ctg aac ccg tcc							3145
	Ala Ala Tyr Ala Ala Gln Gly Tyr Lys Val Leu Val Leu Asn Pro Ser							
		435			440		445	
20	gtc gcc gcc acc cta ggt ttc ggg gcg tat atg tct aag gca cat ggt							3193
	Val Ala Ala Thr Leu Gly Phe Gly Ala Tyr Met Ser Lys Ala His Gly							
		450			455		460	
25	atc gac cct aac atc aga acc ggg gta agg acc atc acc acg ggt gcc							3241
	Ile Asp Pro Asn Ile Arg Thr Gly Val Arg Thr Ile Thr Thr Gly Ala							
		465			470		475	480
30	ccc atc acg tac tcc acc tat ggc aag ttt ctt gcc gac ggt ggt tgc							3289
	Pro Ile Thr Tyr Ser Thr Tyr Gly Lys Phe Leu Ala Asp Gly Gly Cys							
		485			490		495	
35	tct ggg ggc gcc tat gac atc ata ata tgt gat gag tgc cac tca act							3337
	Ser Gly Gly Ala Tyr Asp Ile Ile Ile Cys Asp Glu Cys His Ser Thr							
		500			505		510	
40	gac tcg acc act atc ctg ggc atc ggc aca gtc ctg gac caa gcg gag							3385
	Asp Ser Thr Thr Ile Leu Gly Ile Gly Thr Val Leu Asp Gln Ala Glu							
		515			520		525	
45	acg gct gga gcg cga ctc gtc gtg ctc gcc acc gct acg cct ccg gga							3433
	Thr Ala Gly Ala Arg Leu Val Val Leu Ala Thr Ala Thr Pro Pro Gly							
		530			535		540	
50	tcg gtc acc gtg cca cat cca aac atc gag gag gtg gct ctg tcc agc							3481
	Ser Val Thr Val Pro His Pro Asn Ile Glu Glu Val Ala Leu Ser Ser							
		545			550		555	560
55	act gga gaa atc ccc ttt tat ggc aaa gcc atc ccc atc gag acc atc							3529
	Thr Gly Glu Ile Pro Phe Tyr Gly Lys Ala Ile Pro Ile Glu Thr Ile							
		565			570		575	
60	aag ggg ggg agg cac ctc att ttc tgc cat tcc aag aag aaa tgt gat							3577
	Lys Gly Gly Arg His Leu Ile Phe Cys His Ser Lys Lys Lys Cys Asp							
		580			585		590	
65	gag ctc gcc gcg aag ctg tcc ggc ctc gga ctc aat gct gta gca tat							3625
	Glu Leu Ala Ala Lys Leu Ser Gly Leu Gly Leu Asn Ala Val Ala Tyr							
		595			600		605	
70	tac cgg ggc ctt gat gta tcc gtc ata cca act agc gga gac gtc att							3673
	Tyr Arg Gly Leu Asp Val Ser Val Ile Pro Thr Ser Gly Asp Val Ile							
		610			615		620	

5	gtc Val 625	gta Val	gca Ala	acg Thr	gac Asp	gct Ala 630	cta Leu	atg Met	acg Thr	ggc Gly	ttt Phe 635	acc Thr	ggc Gly	gat Asp	ttc Phe	gac Asp 640	3721
	tca Ser	gtg Val	atc Ile	gac Asp	tgc Cys 645	aat Asn	aca Thr	tgt Cys	gtc Val	acc Thr 650	cag Gln	aca Thr	gtc Val	gac Asp	ttc Phe 655	agc Ser	3769
10	ctg Leu	gac Asp	ccg Pro	acc Thr 660	ttc Phe	acc Thr	att Ile	gag Glu	acg Thr 665	acg Thr	acc Thr	gtg Val	cca Pro	caa Gln 670	gac Asp	gcg Ala	3817
15	gtg Val	tca Ser	cgc Arg 675	tcg Ser	cag Gln	cgg Arg	cga Arg	ggc Gly 680	agg Arg	act Thr	ggt Gly	agg Arg	ggc Gly 685	agg Arg	atg Met	ggc Gly	3865
20	att Ile	tac Tyr 690	agg Arg	ttt Phe	gtg Val	act Thr	cca Pro 695	gga Gly	gaa Glu	cgg Arg	ccc Pro	tcg Ser 700	ggc Gly	atg Met	ttc Phe	gat Asp	3913
25	tcc Ser 705	tcg Ser	gtt Val	ctg Leu	tgc Cys	gag Glu 710	tgc Cys	tat Tyr	gac Asp	gcg Ala	ggc Gly 715	tgt Cys	gct Ala	tgg Trp	tac Tyr	gag Glu 720	3961
30	ctc Leu	acg Thr	ccc Pro	gcc Ala 725	gag Glu	acc Thr	tca Ser	gtt Val	agg Arg 730	ttg Leu	cgg Arg	gct Ala	tac Tyr	cta Leu	aac Asn 735	aca Thr	4009
	cca Pro	ggg Gly	ttg Leu	ccc Pro 740	gtc Val	tgc Cys	cag Gln	gac Asp	cat His 745	ctg Leu	gag Glu	ttc Phe	tgg Trp	gag Glu 750	agc Ser	gtc Val	4057
35	ttt Phe	aca Thr	ggc Gly 755	ctc Leu	acc Thr	cac His	ata Ile	gac Asp 760	gcc Ala	cat His	ttc Phe	ttg Leu	tcc Ser 765	cag Gln	act Thr	aag Lys	4105
40	cag Gln 770	gca Ala	gga Gly	gac Asp	aac Asn	ttc Phe	ccc Pro 775	tac Tyr	ctg Leu	gta Val	gca Ala	tac Tyr 780	cag Gln	gct Ala	acg Thr	gtg Val	4153
45	tgc Cys 785	gcc Ala	agg Arg	gct Ala	cag Gln	gct Ala 790	cca Pro	cct Pro	cca Pro	tcg Ser	tgg Trp 795	gac Asp	caa Gln	atg Met	tgg Trp	aag Lys 800	4201
50	tgt Cys	ctc Leu	ata Ile	cgg Arg	cta Leu 805	aag Lys	cct Pro	acg Thr	ctg Leu	cac His 810	ggg Gly	cca Pro	acg Thr	ccc Pro	ctg Leu 815	ctg Leu	4249
	tat Tyr	agg Arg	ctg Leu	gga Gly 820	gcc Ala	gtt Val	caa Gln	aac Asn	gag Glu 825	gtt Val	act Thr	acc Thr	aca Thr	cac His 830	ccc Pro	ata Ile	4297
55	acc Thr	aaa Lys	tac Tyr 835	atc Ile	atg Met	gca Ala	tgc Cys	atg Met 840	tcg Ser	gct Ala	gac Asp	ctg Leu	gag Glu 845	gtc Val	gtc Val	acg Thr	4345

	agc acc tgg gtg ctg gta ggc gga gtc cta gca gct ctg gcc gcg tat	4393
	Ser Thr Trp Val Leu Val Gly Gly Val Leu Ala Ala Leu Ala Ala Tyr	
	850 855 860	
5	tgc ctg aca aca ggc agc gtg gtc att gtg ggc agg atc atc ttg tcc	4441
	Cys Leu Thr Thr Gly Ser Val Val Ile Val Gly Arg Ile Ile Leu Ser	
	865 870 875 880	
10	gga aag ccg gcc atc att ccc gac agg gaa gtc ttt tac cgg gag ttc	4489
	Gly Lys Pro Ala Ile Ile Pro Asp Arg Glu Val Phe Tyr Arg Glu Phe	
	885 890 895	
15	gat gag atg gaa gag tgc gcc tca cac ctc cct tac atc gaa cag gga	4537
	Asp Glu Met Glu Glu Cys Ala Ser His Leu Pro Tyr Ile Glu Gln Gly	
	900 905 910	
	atg cag ctc gcc gaa caa ttc aaa cag aag gca atc ggg ttg ctg caa	4585
	Met Gln Leu Ala Glu Gln Phe Lys Gln Lys Ala Ile Gly Leu Leu Gln	
	915 920 925	
20	aca gcc acc aag caa gcg gag gct gct gct ccc gtg gtg gaa tcc aag	4633
	Thr Ala Thr Lys Gln Ala Glu Ala Ala Ala Pro Val Val Glu Ser Lys	
	930 935 940	
25	tgg cgg acc ctc gaa gcc ttc tgg gcg aag cat atg tgg aat ttc atc	4681
	Trp Arg Thr Leu Glu Ala Phe Trp Ala Lys His Met Trp Asn Phe Ile	
	945 950 955 960	
30	agc ggg ata caa tat tta gca ggc ttg tcc act ctg cct ggc aac ccc	4729
	Ser Gly Ile Gln Tyr Leu Ala Gly Leu Ser Thr Leu Pro Gly Asn Pro	
	965 970 975	
35	gcg ata gca tca ctg atg gca ttc aca gcc tct atc acc agc ccg ctc	4777
	Ala Ile Ala Ser Leu Met Ala Phe Thr Ala Ser Ile Thr Ser Pro Leu	
	980 985 990	
	acc acc caa cat acc ctc ctg ttt aac atc ctg ggg gga tgg gtg gcc	4825
	Thr Thr Gln His Thr Leu Leu Phe Asn Ile Leu Gly Gly Trp Val Ala	
	995 1000 1005	
40	gcc caa ctt gct cct ccc agc gct gct tct gct ttc gta ggc gcc gcc	4873
	Ala Gln Leu Ala Pro Pro Ser Ala Ala Ser Ala Phe Val Gly Ala Gly	
	1010 1015 1020	
45	atc gct gga gcg gct gtt ggc agc ata ggc ctt ggg aag gtg ctt gtg	4921
	Ile Ala Gly Ala Ala Val Gly Ser Ile Gly Leu Gly Lys Val Leu Val	
	1025 1030 1035 1040	
50	gat att ttg gca ggt tat gga gca ggg gtg gca ggc gcg ctc gtg gcc	4969
	Asp Ile Leu Ala Gly Tyr Gly Ala Gly Val Ala Gly Ala Leu Val Ala	
	1045 1050 1055	
	ttt aag gtc atg agc ggc gag atg ccc tcc acc gag gac ctg gtt aac	5017
	Phe Lys Val Met Ser Gly Glu Met Pro Ser Thr Glu Asp Leu Val Asn	
	1060 1065 1070	
55	cta ctc cct gct atc ctc tcc cct ggc gcc cta gtc gtc ggg gtc gtg	5065

	Leu Leu Pro Ala Ile Leu Ser Pro Gly Ala Leu Val Val Gly Val Val	
	1075 1080 1085	
5	tgc gca gcg ata ctg cgt cgg cac gtg ggc cca ggg gag ggg gct gtg Cys Ala Ala Ile Leu Arg Arg His Val Gly Pro Gly Glu Gly Ala Val	5113
	1090 1095 1100	
10	cag tgg atg aac cgg ctg ata gcg ttc gct tcg cgg ggt aac cac gtc Gln Trp Met Asn Arg Leu Ile Ala Phe Ala Ser Arg Gly Asn His Val	5161
	1105 1110 1115 1120	
15	tcc ccc acg cac tat gtg cct gag agc gac gct gca gca cgt gtc act Ser Pro Thr His Tyr Val Pro Glu Ser Asp Ala Ala Ala Arg Val Thr	5209
	1125 1130 1135	
	cag atc ctc tct agt ctt acc atc act cag ctg ctg aag agg ctt cac Gln Ile Leu Ser Ser Leu Thr Ile Thr Gln Leu Leu Lys Arg Leu His	5257
	1140 1145 1150	
20	cag tgg atc aac gag gac tgc tcc acg cca tgc tcc ggc tcg tgg cta Gln Trp Ile Asn Glu Asp Cys Ser Thr Pro Cys Ser Gly Ser Trp Leu	5305
	1155 1160 1165	
25	aga gat gtt tgg gat tgg ata tgc acg gtg ttg act gat ttc aag acc Arg Asp Val Trp Asp Trp Ile Cys Thr Val Leu Thr Asp Phe Lys Thr	5353
	1170 1175 1180	
30	tgg ctc cag tcc aag ctc ctg ccg cga ttg ccg gga gtc ccc ttc ttc Trp Leu Gln Ser Lys Leu Leu Pro Arg Leu Pro Gly Val Pro Phe Phe	5401
	1185 1190 1195 1200	
35	tca tgt caa cgt ggg tac aag gga gtc tgg cgg ggc gac ggc atc atg Ser Cys Gln Arg Gly Tyr Lys Gly Val Trp Arg Gly Asp Gly Ile Met	5449
	1205 1210 1215	
	caa acc acc tgc cca tgt gga gca cag atc acc gga cat gtg aaa aac Gln Thr Thr Cys Pro Cys Gly Ala Gln Ile Thr Gly His Val Lys Asn	5497
	1220 1225 1230	
40	cgt tcc atg agg atc gtg ggg cct agg acc tgt agt aac acg tgg cat Arg Ser Met Arg Ile Val Gly Pro Arg Thr Cys Ser Asn Thr Trp His	5545
	1235 1240 1245	
45	gga aca ttc ccc att aac gcg tac acc acg ggc ccc tgc acg ccc tcc Gly Thr Phe Pro Ile Asn Ala Tyr Thr Thr Gly Pro Cys Thr Pro Ser	5593
	1250 1255 1260	
50	ccg gcg cca aat tat tct agg gcg ctg tgg cgg gtg gct gct gag gag Pro Ala Pro Asn Tyr Ser Arg Ala Leu Trp Arg Val Ala Ala Glu Glu	5641
	1265 1270 1275 1280	
55	tac gtg gag gtt acg cgg gtg ggg gat ttc cac tac gtg acg ggc atg Tyr Val Glu Val Thr Arg Val Gly Asp Phe His Tyr Val Thr Gly Met	5689
	1285 1290 1295	
	acc act gac aac gta aag tgc ccg tgt cag gtt ccg gcc ccc gaa ttc Thr Thr Asp Asn Val Lys Cys Pro Cys Gln Val Pro Ala Pro Glu Phe	5737

	1300	1305	1310	
5	ttc aca gaa gtg gat ggg gtg cgg ttg cac agg tac gct cca gcg tgc Phe Thr Glu Val Asp Gly Val Arg Leu His Arg Tyr Ala Pro Ala Cys 1315 1320 1325	5785		
10	aaa ccc ctc cta cgg gag gag gtc aca ttc ctg gtc ggg ctc aat caa Lys Pro Leu Leu Arg Glu Glu Val Thr Phe Leu Val Gly Leu Asn Gln 1330 1335 1340	5833		
15	tac ctg gtt ggg tca cag ctc cca tgc gag ccc gaa ccg gac gta gca Tyr Leu Val Gly Ser Gln Leu Pro Cys Glu Pro Glu Pro Asp Val Ala 1345 1350 1355 1360	5881		
20	gtg ctc act tcc atg ctc acc gac ccc tcc cac att acg gcg gag acg Val Leu Thr Ser Met Leu Thr Asp Pro Ser His Ile Thr Ala Glu Thr 1365 1370 1375	5929		
25	gct aag cgt agg ctg gcc agg gga tct ccc ccc tcc ttg gcc agc tca Ala Lys Arg Arg Leu Ala Arg Gly Ser Pro Pro Ser Leu Ala Ser Ser 1380 1385 1390	5977		
30	tca gct agc cag ctg tct gcg cct tcc ttg aag gca aca tgc act acc Ser Ala Ser Gln Leu Ser Ala Pro Ser Leu Lys Ala Thr Cys Thr Thr 1395 1400 1405	6025		
35	cgt cat gac tcc ccg gac gct gac ctc atc gag gcc aac ctc ctg tgg Arg His Asp Ser Pro Asp Ala Asp Leu Ile Glu Ala Asn Leu Leu Trp 1410 1415 1420	6073		
40	cgg cag gag atg ggc ggg aac atc acc cgc gtg gag tca gaa aat aag Arg Gln Glu Met Gly Gly Asn Ile Thr Arg Val Glu Ser Glu Asn Lys 1425 1430 1435 1440	6121		
45	gta gta att ttg gac tct ttc gag ccg ctc caa gcg gag gag gat gag Val Val Ile Leu Asp Ser Phe Glu Pro Leu Gln Ala Glu Glu Asp Glu 1445 1450 1455	6169		
50	agg gaa gta tcc gtt ccg gcg gag atc ctg ccg agg tcc agg aaa ttc Arg Glu Val Ser Val Pro Ala Glu Ile Leu Arg Arg Ser Arg Lys Phe 1460 1465 1470	6217		
55	cct cga gcg atg ccc ata tgg gca cgc ccg gat tac aac cct cca ctg Pro Arg Ala Met Pro Ile Trp Ala Arg Pro Asp Tyr Asn Pro Pro Leu 1475 1480 1485	6265		
60	tta gag tcc tgg aag gac ccg gac tac gtc cct cca gtg gta cac ggg Leu Glu Ser Trp Lys Asp Pro Asp Tyr Val Pro Pro Val Val His Gly 1490 1495 1500	6313		
65	tgt cca ctg ccg cct gcc aag gcc cct ccg ata cca cct cca cgg agg Cys Pro Leu Pro Pro Ala Lys Ala Pro Pro Ile Pro Pro Pro Arg Arg 1505 1510 1515 1520	6361		
70	aag agg acg gtt gtc ctg tca gaa tct acc gtg tct tct gcc ttg gcg Lys Arg Thr Val Leu Ser Glu Ser Thr Val Ser Ser Ala Leu Ala 1525 1530 1535	6409		

	gag ctc gcc aca aag acc ttc ggc agc tcc gaa tcg tcg gcc gtc gac	6457
	Glu Leu Ala Thr Lys Thr Phe Gly Ser Ser Glu Ser Ser Ala Val Asp	
	1540 1545 1550	
5	agc ggc acg gca acg gcc tct cct gac cag ccc tcc gac gac ggc gac	6505
	Ser Gly Thr Ala Thr Ala Ser Pro Asp Gln Pro Ser Asp Asp Gly Asp	
	1555 1560 1565	
10	gcg gga tcc gac gtt gag tcg tac tcc tcc atg ccc ccc ctt gag ggg	6553
	Ala Gly Ser Asp Val Glu Ser Tyr Ser Ser Met Pro Pro Leu Glu Gly	
	1570 1575 1580	
15	gag ccg ggg gat ccc gat ctc agc gac ggg cct tgg tct acc gta agc	6601
	Glu Pro Gly Asp Pro Asp Leu Ser Asp Gly Pro Trp Ser Thr Val Ser	
	1585 1590 1595 1600	
20	gag gag gct agt gag gac gtc gtc tgc tgc tcg atg tcc tac aca tgg	6649
	Glu Glu Ala Ser Glu Asp Val Val Cys Cys Ser Met Ser Tyr Thr Trp	
	1605 1610 1615	
25	aca ggc gcc ctg atc acg cca tgc gct gcg gag gaa acc aag ctg ccc	6697
	Thr Gly Ala Leu Ile Thr Pro Cys Ala Ala Glu Glu Thr Lys Leu Pro	
	1620 1625 1630	
30	atc aat gca ctg agc aac tct ttg ctc cgt cac cac aac ttg gtc tat	6745
	Ile Asn Ala Leu Ser Asn Ser Leu Leu Arg His His Asn Leu Val Tyr	
	1635 1640 1645	
35	gct aca aca tct cgc agc gca agc ctg cgg cag aag aag gtc acc ttt	6793
	Ala Thr Thr Ser Arg Ser Ala Ser Leu Arg Gln Lys Lys Val Thr Phe	
	1650 1655 1660	
40	gac aga ctg cag gtc ctg gac gac cac tac cgg gac gtg ctc aag gag	6841
	Asp Arg Leu Gln Val Leu Asp Asp His Tyr Arg Asp Val Leu Lys Glu	
	1665 1670 1675 1680	
45	atg aag gcg aag gcg tcc aca gtt aag gct aaa ctt cta tcc gtg gag	6889
	Met Lys Ala Lys Ala Ser Thr Val Lys Ala Lys Leu Leu Ser Val Glu	
	1685 1690 1695	
50	gaa gcc tgt aag ctg acg ccc cca cat tcg gcc aga tct aaa ttt ggc	6937
	Glu Ala Cys Lys Leu Thr Pro Pro His Ser Ala Arg Ser Lys Phe Gly	
	1700 1705 1710	
55	tat ggg gca aag gac gtc cgg aac cta tcc agc aag gcc gtt aac cac	6985
	Tyr Gly Ala Lys Asp Val Arg Asn Leu Ser Ser Lys Ala Val Asn His	
	1715 1720 1725	
50	atc cgc tcc gtg tgg aag gac ttg ctg gaa gac act gag aca cca att	7033
	Ile Arg Ser Val Trp Lys Asp Leu Leu Glu Asp Thr Glu Thr Pro Ile	
	1730 1735 1740	
55	gac acc acc atc atg gca aaa aat gag gtt ttc tgc gtc caa cca gag	7081
	Asp Thr Thr Ile Met Ala Lys Asn Glu Val Phe Cys Val Gln Pro Glu	
	1745 1750 1755 1760	

	aag ggg ggc cgc aag cca gct cgc ctt atc gta ttc cca gat ttg ggg	7129
	Lys Gly Gly Arg Lys Pro Ala Arg Leu Ile Val Phe Pro Asp Leu Gly	
	1765 1770 1775	
5	gtt cgt gtg tgc gag aaa atg gcc ctt tac gat gtg gtc tcc acc ctc	7177
	Val Arg Val Cys Glu Lys Met Ala Leu Tyr Asp Val Val Ser Thr Leu	
	1780 1785 1790	
10	cct cag gcc gtg atg ggc tct tca tac gga ttc caa tac tct cct gga	7225
	Pro Gln Ala Val Met Gly Ser Tyr Gly Phe Gln Tyr Ser Pro Gly	
	1795 1800 1805	
15	cag cgg gtc gag ttc ctg gtg aat gcc tgg aaa gcg aag aaa tgc cct	7273
	Gln Arg Val Glu Phe Leu Val Asn Ala Trp Lys Ala Lys Lys Cys Pro	
	1810 1815 1820	
20	atg ggc ttc gca tat gac acc cgc tgt ttt gac tca acg gtc act gag	7321
	Met Gly Phe Ala Tyr Asp Thr Arg Cys Phe Asp Ser Thr Val Thr Glu	
	1825 1830 1835 1840	
25	aat gac atc cgt gtt gag gag tca atc tac caa tgt tgt gac ttg gcc	7369
	Asn Asp Ile Arg Val Glu Glu Ser Ile Tyr Gln Cys Cys Asp Leu Ala	
	1845 1850 1855	
30	ccc gaa gcc aga cag gcc ata agg tcg ctc aca gag cgg ctt tac atc	7417
	Pro Glu Ala Arg Gln Ala Ile Arg Ser Leu Thr Glu Arg Leu Tyr Ile	
	1860 1865 1870	
35	ggg ggc ccc ctg act aat tct aaa ggg cag aac tgc ggc tat cgc cgg	7465
	Gly Gly Pro Leu Thr Asn Ser Lys Gly Gln Asn Cys Gly Tyr Arg Arg	
	1875 1880 1885	
40	tgc cgc gcg agc ggt gta ctg acg acc agc tgc ggt aat acc ctc aca	7513
	Cys Arg Ala Ser Gly Val Leu Thr Thr Ser Cys Gly Asn Thr Leu Thr	
	1890 1895 1900	
45	tgt tac ttg aag gcc gct gcg gcc tgt cga gct gcg aag ctc cag gac	7561
	Cys Tyr Leu Lys Ala Ala Ala Cys Arg Ala Ala Lys Leu Gln Asp	
	1905 1910 1915 1920	
50	tgc acg atg ctc gta tgc gga gac gac ctt gtc gtt atc tgt gaa agc	7609
	Cys Thr Met Leu Val Cys Gly Asp Asp Leu Val Val Ile Cys Glu Ser	
	1925 1930 1935	
55	gcg ggg acc caa gag gac gag gcg agc cta cgg gcc ttc acg gag gct	7657
	Ala Gly Thr Gln Glu Asp Glu Ala Ser Leu Arg Ala Phe Thr Glu Ala	
	1940 1945 1950	
60	atg act aga tac tct gcc ccc cct ggg gac ccg ccc aaa cca gaa tac	7705
	Met Thr Arg Tyr Ser Ala Pro Pro Gly Asp Pro Pro Lys Pro Glu Tyr	
	1955 1960 1965	
65	gac ttg gag ttg ata aca tca tgc tcc tcc aat gtg tca gtc gcg cac	7753
	Asp Leu Glu Leu Ile Thr Ser Cys Ser Ser Asn Val Ser Val Ala His	
	1970 1975 1980	
70	gat gca tct ggc aaa agg gtg tac tat ctc acc cgt gac ccc acc acc	7801

	Asp	Ala	Ser	Gly	Lys	Arg	Val	Tyr	Tyr	Leu	Thr	Arg	Asp	Pro	Thr	Thr	
	1985					1990				1995						2000	
5	ccc	ctt	gcg	cgg	gct	gcg	tgg	gag	aca	gct	aga	cac	act	cca	gtc	aat	7849
	Pro	Leu	Ala	Arg	Ala	Ala	Trp	Glu	Thr	Ala	Arg	His	Thr	Pro	Val	Asn	
					2005					2010					2015		
10	tcc	tgg	cta	ggc	aac	atc	atc	atg	tat	gcg	ccc	acc	ttg	tgg	gca	agg	7897
	Ser	Trp	Leu	Gly	Asn	Ile	Ile	Met	Tyr	Ala	Pro	Thr	Leu	Trp	Ala	Arg	
				2020					2025					2030			
15	atg	atc	ctg	atg	act	cat	ttc	ttc	tcc	atc	ctt	cta	gct	cag	gaa	caa	7945
	Met	Ile	Leu	Met	Thr	His	Phe	Phe	Ser	Ile	Leu	Leu	Ala	Gln	Glu	Gln	
			2035					2040					2045				
	ctt	gaa	aaa	gcc	cta	gat	tgt	cag	atc	tac	ggg	gcc	tgt	tac	tcc	att	7993
	Leu	Glu	Lys	Ala	Leu	Asp	Cys	Gln	Ile	Tyr	Gly	Ala	Cys	Tyr	Ser	Ile	
		2050					2055					2060					
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	355 360 365	
15	ggc atc ttt cgg gct gcc gtg tgc acc cga ggg gtt gcg aag gcg gtg Gly Ile Phe Arg Ala Ala Val Cys Thr Arg Gly Val Ala Lys Ala Val	2953
	370 375 380	
	gac ttt gta ccc gtc gag tct atg gaa acc act atg cgg tcc ccg gtc Asp Phe Val Pro Val Glu Ser Met Glu Thr Thr Met Arg Ser Pro Val	3001
	385 390 395 400	
20	ttc acg gac aac tcg tcc cct ccg gcc gta ccg cag aca ttc cag gtg Phe Thr Asp Asn Ser Ser Pro Pro Ala Val Pro Gln Thr Phe Gln Val	3049
	405 410 415	
25	gcc cat cta cac gcc cct act ggt agc ggc aag agc act aag gtg ccg Ala His Leu His Ala Pro Thr Gly Ser Gly Lys Ser Thr Lys Val Pro	3097
	420 425 430	
30	gct gcg tat gca gcc caa ggg tat aag gtg ctt gtc ctg aac ccg tcc Ala Ala Tyr Ala Ala Gln Gly Tyr Lys Val Leu Val Leu Asn Pro Ser	3145
	435 440 445	
35	gtc gcc gcc acc cta ggt ttc ggg gcg tat atg tct aag gca cat ggt Val Ala Ala Thr Leu Gly Phe Gly Ala Tyr Met Ser Lys Ala His Gly	3193
	450 455 460	
	atc gac cct aac atc aga acc ggg gta agg acc atc acc acg ggt gcc Ile Asp Pro Asn Ile Arg Thr Gly Val Arg Thr Ile Thr Thr Gly Ala	3241
	465 470 475 480	
40	ccc atc acg tac tcc acc tat ggc aag ttt ctt gcc gac ggt ggt tgc Pro Ile Thr Tyr Ser Thr Tyr Gly Lys Phe Leu Ala Asp Gly Gly Cys	3289
	485 490 495	
45	tct ggg ggc gcc tat gac atc ata ata tgt gat gag tgc cac tca act Ser Gly Gly Ala Tyr Asp Ile Ile Ile Cys Asp Glu Cys His Ser Thr	3337
	500 505 510	
50	gac tcg acc act atc ctg ggc atc ggc aca gtc ctg gac caa gcg gag Asp Ser Thr Thr Ile Leu Gly Ile Gly Thr Val Leu Asp Gln Ala Glu	3385
	515 520 525	
	acg gct gga gcg cga ctc gtc gtg ctc gcc acc gct acg cct ccg gga Thr Ala Gly Ala Arg Leu Val Leu Ala Thr Ala Thr Pro Pro Gly	3433
	530 535 540	
55	tcg gtc acc gtg cca cat cca aac atc gag gag gtg gct ctg tcc agc Ser Val Thr Val Pro His Pro Asn Ile Glu Glu Val Ala Leu Ser Ser	3481

	545		550		555		560	
5	act gga gaa atc ccc ttt tat ggc aaa gcc atc ccc atc gag acc atc		565		570		575	3529
	Thr Gly Glu Ile Pro Phe Tyr Gly Lys Ala Ile Pro Ile Glu Thr Ile							
10	aag ggg ggg agg cac ctc att ttc tgc cat tcc aag aag aaa tgt gat		580		585		590	3577
	Lys Gly Gly Arg His Leu Ile Phe Cys His Ser Lys Lys Lys Cys Asp							
15	gag ctc gcc gcg aag ctg tcc ggc ctc gga ctc aat gct gta gca tat		595		600		605	3625
	Glu Leu Ala Ala Lys Leu Ser Gly Leu Gly Leu Asn Ala Val Ala Tyr							
20	tac cgg ggc ctt gat gta tcc gtc ata cca act agc gga gac gtc att		610		615		620	3673
	Tyr Arg Gly Leu Asp Val Ser Val Ile Pro Thr Ser Gly Asp Val Ile							
25	gtc gta gca acg gac gct cta atg acg ggc ttt acc ggc gat ttc gac		625		630		635	3721
	Val Val Ala Thr Asp Ala Leu Met Thr Gly Phe Thr Gly Asp Phe Asp							
30	tca gtg atc gac tgc aat aca tgt gtc acc cag aca gtc gac ttc agc		645		650		655	3769
	Ser Val Ile Asp Cys Asn Thr Cys Val Thr Gln Thr Val Asp Phe Ser							
35	ctg gac ccg acc ttc acc att gag acg acg acc gtg cca caa gac gcg		660		665		670	3817
	Leu Asp Pro Thr Phe Thr Ile Glu Thr Thr Thr Val Pro Gln Asp Ala							
40	gtg tca cgc tcg cag cgg cga ggc agg act ggt agg ggc agg atg ggc		675		680		685	3865
	Val Ser Arg Ser Gln Arg Arg Gly Arg Thr Gly Arg Gly Arg Met Gly							
45	att tac agg ttt gtg act cca gga gaa cgg ccc tcg ggc atg ttc gat		690		695		700	3913
	Ile Tyr Arg Phe Val Thr Pro Gly Glu Arg Pro Ser Gly Met Phe Asp							
50	tcc tcg gtt ctg tgc gag tgc tat gac gcg ggc tgt gct tgg tac gag		705		710		715	3961
	Ser Ser Val Leu Cys Glu Cys Tyr Asp Ala Gly Cys Ala Trp Tyr Glu							
55	ctc acg ccc gcc gag acc tca gtt agg ttg cgg gct tac cta aac aca		725		730		735	4009
	Leu Thr Pro Ala Glu Thr Ser Val Arg Leu Arg Ala Tyr Leu Asn Thr							
60	cca ggg ttg ccc gtc tgc cag gac cat ctg gag ttc tgg gag agc gtc		740		745		750	4057
	Pro Gly Leu Pro Val Cys Gln Asp His Leu Glu Phe Trp Glu Ser Val							
65	ttt aca ggc ctc acc cac ata gac gcc cat ttc ttg tcc cag act aag		755		760		765	4105
	Phe Thr Gly Leu Thr His Ile Asp Ala His Phe Leu Ser Gln Thr Lys							
70	cag gca gga gac aac ttc ccc tac ctg gta gca tac cag gct acg gtg		770		775		780	4153
	Gln Ala Gly Asp Asn Phe Pro Tyr Leu Val Ala Tyr Gln Ala Thr Val							

	tgc gcc agg gct cag gct cca cct cca tgc tgg gac caa atg tgg aag	4201
	Cys Ala Arg Ala Gln Ala Pro Pro Pro Ser Trp Asp Gln Met Trp Lys	
	785 790 795 800	
5	tgt ctc ata cgg cta aag cct acg ctg cac ggg cca acg ccc ctg ctg	4249
	Cys Leu Ile Arg Leu Lys Pro Thr Leu His Gly Pro Thr Pro Leu Leu	
	805 810 815	
10	tat agg ctg gga gcc gtt caa aac gag gtt act acc aca cac ccc ata	4297
	Tyr Arg Leu Gly Ala Val Gln Asn Glu Val Thr Thr Thr His Pro Ile	
	820 825 830	
15	acc aaa tac atc atg gca tgc atg tgc gct gac ctg gag gtc gtc acg	4345
	Thr Lys Tyr Ile Met Ala Cys Met Ser Ala Asp Leu Glu Val Val Thr	
	835 840 845	
20	agc acc tgg gtg ctg gta ggc gga gtc cta gca gct ctg gcc gcg tat	4393
	Ser Thr Trp Val Leu Val Gly Gly Val Leu Ala Ala Leu Ala Ala Tyr	
	850 855 860	
25	tgc ctg aca aca ggc agc gtg gtc att gtg ggc agg atc atc ttg tcc	4441
	Cys Leu Thr Thr Gly Ser Val Val Ile Val Gly Arg Ile Ile Leu Ser	
	865 870 875 880	
	gga aag ccg gcc atc att ccc gac agg gaa gtc ctt tac cgg gag ttc	4489
	Gly Lys Pro Ala Ile Ile Pro Asp Arg Glu Val Leu Tyr Arg Glu Phe	
	885 890 895	
30	gat gag atg gaa gag tgc gcc tca cac ctc cct tac atc gaa cag gga	4537
	Asp Glu Met Glu Glu Cys Ala Ser His Leu Pro Tyr Ile Glu Gln Gly	
	900 905 910	
35	atg cag ctc gcc gaa caa ttc aaa cag aag gca atc ggg ttg ctg caa	4585
	Met Gln Leu Ala Glu Gln Phe Lys Gln Lys Ala Ile Gly Leu Leu Gln	
	915 920 925	
40	aca gcc acc aag caa gcg gag gct gct gct ccc gtg gtg gaa tcc aag	4633
	Thr Ala Thr Lys Gln Ala Glu Ala Ala Ala Pro Val Val Glu Ser Lys	
	930 935 940	
45	tgg cgg acc ctc gaa gcc ttc tgg gcg aag cat atg tgg aat ttc atc	4681
	Trp Arg Thr Leu Glu Ala Phe Trp Ala Lys His Met Trp Asn Phe Ile	
	945 950 955 960	
	agc ggg ata caa tat tta gca ggc ttg tcc act ctg cct ggc aac ccc	4729
	Ser Gly Ile Gln Tyr Leu Ala Gly Leu Ser Thr Leu Pro Gly Asn Pro	
	965 970 975	
50	gcg ata gca tca ctg atg gca ttc aca gcc tct atc acc agc ccg ctc	4777
	Ala Ile Ala Ser Leu Met Ala Phe Thr Ala Ser Ile Thr Ser Pro Leu	
	980 985 990	
55	acc acc caa cat acc ctc ctg ttt aac atc ctg ggg gga tgg gtg gcc	4825
	Thr Thr Gln His Thr Leu Leu Phe Asn Ile Leu Gly Gly Trp Val Ala	
	995 1000 1005	

	gcc caa ctt gct cct ccc agc gct gct tct gct ttc gta ggc gcc ggc	4873
	Ala Gln Leu Ala Pro Pro Ser Ala Ala Ser Ala Phe Val Gly Ala Gly	
	1010 1015 1020	
5	atc gct gga gcg gct gtt ggc agc ata ggc ctt ggg aag gtg ctt gtg	4921
	Ile Ala Gly Ala Ala Val Gly Ser Ile Gly Leu Gly Lys Val Leu Val	
	1025 1030 1035 1040	
10	gat att ttg gca ggt tat gga gca ggg gtg gca ggc gcg ctc gtg gcc	4969
	Asp Ile Leu Ala Gly Tyr Gly Ala Gly Val Ala Gly Ala Leu Val Ala	
	1045 1050 1055	
15	ttt aag gtc atg agc ggc gag atg ccc tcc acc gag gac ctg gtt aac	5017
	Phe Lys Val Met Ser Gly Glu Met Pro Ser Thr Glu Asp Leu Val Asn	
	1060 1065 1070	
20	cta ctc cct gct atc ctc tcc cct ggc gcc cta gtc gtc ggg gtc gtg	5065
	Leu Leu Pro Ala Ile Leu Ser Pro Gly Ala Leu Val Val Gly Val Val	
	1075 1080 1085	
25	tgc gca gcg ata ctg cgt cgg cac gtg ggc cca ggg gag ggg gct gtg	5113
	Cys Ala Ala Ile Leu Arg Arg His Val Gly Pro Gly Glu Gly Ala Val	
	1090 1095 1100	
30	cag tgg atg aac cgg ctg ata gcg ttc gct tcg cgg ggt aac cac gtc	5161
	Gln Trp Met Asn Arg Leu Ile Ala Phe Ala Ser Arg Gly Asn His Val	
	1105 1110 1115 1120	
35	tcc ccc acg cac tat gtg cct gag agc gac gct gca gca cgt gtc act	5209
	Ser Pro Thr His Tyr Val Pro Glu Ser Asp Ala Ala Ala Arg Val Thr	
	1125 1130 1135	
40	cag atc ctc tct agt ctt acc atc act cag ctg ctg aag agg ctt cac	5257
	Gln Ile Leu Ser Ser Leu Thr Ile Thr Gln Leu Leu Lys Arg Leu His	
	1140 1145 1150	
45	cag tgg atc aac gag gac tgc tcc acg cca tgc tcc ggc tcg tgg cta	5305
	Gln Trp Ile Asn Glu Asp Cys Ser Thr Pro Cys Ser Gly Ser Trp Leu	
	1155 1160 1165	
50	aga gat gtt tgg gat tgg ata tgc acg gtg ttg act gat ttc aag acc	5353
	Arg Asp Val Trp Asp Trp Ile Cys Thr Val Leu Thr Asp Phe Lys Thr	
	1170 1175 1180	
55	tgg ctc cag tcc aag ctc ctg ccg cga ttg ccg gga gtc ccc ttc ttc	5401
	Trp Leu Gln Ser Lys Leu Leu Pro Arg Leu Pro Gly Val Pro Phe Phe	
	1185 1190 1195 1200	
55	tca tgt caa cgt ggg tac aag gga gtc tgg cgg ggc gac ggc atc atg	5449
	Ser Cys Gln Arg Gly Tyr Lys Gly Val Trp Arg Gly Asp Gly Ile Met	
	1205 1210 1215	
55	caa acc acc tgc cca tgt gga gca cag atc acc gga cat gtg aaa aac	5497
	Gln Thr Thr Cys Pro Cys Gly Ala Gln Ile Thr Gly His Val Lys Asn	
	1220 1225 1230	
	ggg tcc atg agg atc gtg ggg cct agg acc tgt agt aac acg tgg cat	5545

	Gly	Ser	Met	Arg	Ile	Val	Gly	Pro	Arg	Thr	Cys	Ser	Asn	Thr	Trp	His	
			1235					1240					1245				
5	gga	aca	ttc	ccc	att	aac	gcg	tac	acc	acg	ggc	ccc	tgc	acg	ccc	tcc	5593
	Gly	Thr	Phe	Pro	Ile	Asn	Ala	Tyr	Thr	Thr	Gly	Pro	Cys	Thr	Pro	Ser	
			1250				1255					1260					
10	ccg	gcg	cca	aat	tat	tct	agg	gcg	ctg	tgg	cgg	gtg	gct	gct	gag	gag	5641
	Pro	Ala	Pro	Asn	Tyr	Ser	Arg	Ala	Leu	Trp	Arg	Val	Ala	Ala	Glu	Glu	
			1265			1270					1275				1280		
15	tac	gtg	gag	gtt	acg	cgg	gtg	ggg	gat	ttc	cac	tac	gtg	acg	ggc	atg	5689
	Tyr	Val	Glu	Val	Thr	Arg	Val	Gly	Asp	Phe	His	Tyr	Val	Thr	Gly	Met	
					1285					1290					1295		
20	acc	act	gac	aac	gta	aag	tgc	ccg	tgt	cag	gtt	ccg	gcc	ccc	gaa	ttc	5737
	Thr	Thr	Asp	Asn	Val	Lys	Cys	Pro	Cys	Gln	Val	Pro	Ala	Pro	Glu	Phe	
				1300				1305						1310			
25	ttc	aca	gaa	gtg	gat	ggg	gtg	cgg	ttg	cac	agg	tac	gct	cca	gcg	tgc	5785
	Phe	Thr	Glu	Val	Asp	Gly	Val	Arg	Leu	His	Arg	Tyr	Ala	Pro	Ala	Cys	
			1315				1320						1325				
30	aaa	ccc	ctc	cta	cgg	gag	gag	gtc	aca	ttc	ctg	gtc	ggg	ctc	aat	caa	5833
	Lys	Pro	Leu	Leu	Arg	Glu	Glu	Val	Thr	Phe	Leu	Val	Gly	Leu	Asn	Gln	
			1330			1335						1340					
35	tac	ctg	gtt	ggg	tca	cag	ctc	cca	tgc	gag	ccc	gaa	ccg	gac	gta	gca	5881
	Tyr	Leu	Val	Gly	Ser	Gln	Leu	Pro	Cys	Glu	Pro	Glu	Pro	Asp	Val	Ala	
		1345			1350					1355					1360		
40	gtg	ctc	act	tcc	atg	ctc	acc	gac	ccc	tcc	cac	att	acg	gcg	gag	acg	5929
	Val	Leu	Thr	Ser	Met	Leu	Thr	Asp	Pro	Ser	His	Ile	Thr	Ala	Glu	Thr	
				1365					1370						1375		
45	gct	aag	cgt	agg	ctg	gcc	agg	gga	tct	ccc	ccc	tcc	ttg	gcc	agc	tca	5977
	Ala	Lys	Arg	Arg	Leu	Ala	Arg	Gly	Ser	Pro	Pro	Ser	Leu	Ala	Ser	Ser	
			1380					1385					1390				
50	tca	gct	agc	cag	ctg	tct	gcg	cct	tcc	ttg	aag	gca	aca	tgc	act	acc	6025
	Ser	Ala	Ser	Gln	Leu	Ser	Ala	Pro	Ser	Leu	Lys	Ala	Thr	Cys	Thr	Thr	
			1395				1400						1405				
55	cgt	cat	gac	tcc	ccg	gac	gct	gac	ctc	atc	gag	gcc	aac	ctc	ctg	tgg	6073
	Arg	His	Asp	Ser	Pro	Asp	Ala	Asp	Leu	Ile	Glu	Ala	Asn	Leu	Leu	Trp	
		1410				1415					1420						
60	cgg	cag	gag	atg	ggc	ggg	aac	atc	acc	cgc	gtg	gag	tca	gaa	aat	aag	6121
	Arg	Gln	Glu	Met	Gly	Gly	Asn	Ile	Thr	Arg	Val	Glu	Ser	Glu	Asn	Lys	
		1425			1430					1435					1440		
65	gta	gta	att	ttg	gac	tct	ttc	gag	ccg	ctc	caa	gcg	gag	gag	gat	gag	6169
	Val	Val	Ile	Leu	Asp	Ser	Phe	Glu	Pro	Leu	Gln	Ala	Glu	Glu	Asp	Glu	
				1445				1450						1455			
70	agg	gaa	gta	tcc	gtt	ccg	gcg	gag	atc	ctg	cgg	agg	tcc	agg	aaa	ttc	6217
	Arg	Glu	Val	Ser	Val	Pro	Ala	Glu	Ile	Leu	Arg	Arg	Ser	Arg	Lys	Phe	

	1460	1465	1470	
5	cct cga gcg atg ccc ata tgg gca cgc ccg gat tac aac cct cca ctg Pro Arg Ala Met Pro Ile Trp Ala Arg Pro Asp Tyr Asn Pro Pro Leu 1475 1480 1485	6265		
10	tta gag tcc tgg aag gac ccg gac tac gtc cct cca gtg gta cac ggg Leu Glu Ser Trp Lys Asp Pro Asp Tyr Val Pro Pro Val Val His Gly 1490 1495 1500	6313		
15	tgt cca ttg ccg cct gcc aag gcc cct ccg ata cca cct cca cgg agg Cys Pro Leu Pro Pro Ala Lys Ala Pro Pro Ile Pro Pro Pro Arg Arg 1505 1510 1515 1520	6361		
20	aag agg acg gtt gtc ctg tca gaa tct acc gtg tct tct gcc ttg gcg Lys Arg Thr Val Val Leu Ser Glu Ser Thr Val Ser Ser Ala Leu Ala 1525 1530 1535	6409		
25	gag ctc gcc aca aag acc ttc ggc agc tcc gaa tcg tcg gcc gtc gac Glu Leu Ala Thr Lys Thr Phe Gly Ser Ser Glu Ser Ser Ala Val Asp 1540 1545 1550	6457		
30	agc ggc acg gca acg gcc tct cct gac cag ccc tcc gac gac ggc gac Ser Gly Thr Ala Thr Ala Ser Pro Asp Gln Pro Ser Asp Asp Gly Asp 1555 1560 1565	6505		
35	gcg gga tcc gac gtt gag tcg tac tcc tcc atg ccc ccc ctt gag ggg Ala Gly Ser Asp Val Glu Ser Tyr Ser Ser Met Pro Pro Leu Glu Gly 1570 1575 1580	6553		
40	gag ccg ggg gat ccc gat ctc agc gac ggg tct tgg tct acc gta agc Glu Pro Gly Asp Pro Asp Leu Ser Asp Gly Ser Trp Ser Thr Val Ser 1585 1590 1595 1600	6601		
45	gag gag gct agt gag gac gtc gtc tgc tgc tcg atg tcc tac aca tgg Glu Glu Ala Ser Glu Asp Val Val Cys Cys Ser Met Ser Tyr Thr Trp 1605 1610 1615	6649		
50	aca ggc gcc ctg atc acg cca tgc gct gcg gag gaa acc aag ctg ccc Thr Gly Ala Leu Ile Thr Pro Cys Ala Ala Glu Glu Thr Lys Leu Pro 1620 1625 1630	6697		
55	atc aat gca ctg agc aac tct ttg ctc cgt cac cac aac ttg gtc tat Ile Asn Ala Leu Ser Asn Ser Leu Leu Arg His His Asn Leu Val Tyr 1635 1640 1645	6745		
60	gct aca aca tct cgc agc gca agc ctg cgg cag aag aag gtc acc ttt Ala Thr Thr Ser Arg Ser Ala Ser Leu Arg Gln Lys Lys Val Thr Phe 1650 1655 1660	6793		
65	gac aga ctg cag gtc ctg gac gac cac tac cgg gac gtg ctc aag gag Asp Arg Leu Gln Val Leu Asp Asp His Tyr Arg Asp Val Leu Lys Glu 1665 1670 1675 1680	6841		
70	atg aag gcg aag gcg tcc aca gtt aag gct aaa ctt cta tcc gtg gag Met Lys Ala Lys Ala Ser Thr Val Lys Ala Lys Leu Leu Ser Val Glu 1685 1690 1695	6889		

	gaa gcc tgt aag ctg acg ccc cca cat tcg gcc aga tct aaa ttt ggc	6937
	Glu Ala Cys Lys Leu Thr Pro Pro His Ser Ala Arg Ser Lys Phe Gly	
	1700 1705 1710	
5	tat ggg gca aag gac gtc cgg aac cta tcc agc aag gcc gtt aac cac	6985
	Tyr Gly Ala Lys Asp Val Arg Asn Leu Ser Ser Lys Ala Val Asn His	
	1715 1720 1725	
10	atc cgc tcc gtg tgg aag gac ttg ctg gaa gac act gag aca cca att	7033
	Ile Arg Ser Val Trp Lys Asp Leu Leu Glu Asp Thr Glu Thr Pro Ile	
	1730 1735 1740	
15	gac acc acc atc atg gca aaa aat gag gtt ttc tgc gtc caa cca gag	7081
	Asp Thr Thr Ile Met Ala Lys Asn Glu Val Phe Cys Val Gln Pro Glu	
	1745 1750 1755 1760	
20	aag ggg ggc cgc aag cca gct cgc ctt atc gta ttc cca gat ttg ggg	7129
	Lys Gly Gly Arg Lys Pro Ala Arg Leu Ile Val Phe Pro Asp Leu Gly	
	1765 1770 1775	
25	gtt cgt gtg tgc gag aaa atg gcc ctt tac gat gtg gtc tcc acc ctc	7177
	Val Arg Val Cys Glu Lys Met Ala Leu Tyr Asp Val Val Ser Thr Leu	
	1780 1785 1790	
30	cct cag gcc gtg atg ggc tct tca tac gga ttc caa tac tct cct gga	7225
	Pro Gln Ala Val Met Gly Ser Ser Tyr Gly Phe Gln Tyr Ser Pro Gly	
	1795 1800 1805	
35	cag cgg gtc gag ttc ctg gtg aat gcc tgg aaa gcg aag aaa tgc cct	7273
	Gln Arg Val Glu Phe Leu Val Asn Ala Trp Lys Ala Lys Lys Cys Pro	
	1810 1815 1820	
40	aat gac atc cgt gtt gag gag tca atc tac caa tgt tgt gac ttg gcc	7369
	Asn Asp Ile Arg Val Glu Glu Ser Ile Tyr Gln Cys Cys Asp Leu Ala	
	1845 1850 1855	
45	ccc gaa gcc aga cag gcc ata agg tcg ctc aca gag cgg ctt tac atc	7417
	Pro Glu Ala Arg Gln Ala Ile Arg Ser Leu Thr Glu Arg Leu Tyr Ile	
	1860 1865 1870	
50	ggg ggc ccc ctg act aat tct aaa ggg cag aac tgc ggc tat cgc cgg	7465
	Gly Gly Pro Leu Thr Asn Ser Lys Gly Gln Asn Cys Gly Tyr Arg Arg	
	1875 1880 1885	
55	tgt tac ttg aag gcc gct gcg gcc tgt cga gct gcg aag ctc cag gac	7561
	Cys Tyr Leu Lys Ala Ala Ala Cys Arg Ala Ala Lys Leu Gln Asp	
	1905 1910 1915 1920	

	tgc acg atg ctc gta tgc gga gac gac ctt gtc gtt atc tgt gaa agc	7609
	Cys Thr Met Leu Val Cys Gly Asp Asp Leu Val Val Ile Cys Glu Ser	
	1925 1930 1935	
5	gcg ggg acc caa gag gac gag gcg agc cta cgg gcc ttc acg gag gct	7657
	Ala Gly Thr Gln Glu Asp Glu Ala Ser Leu Arg Ala Phe Thr Glu Ala	
	1940 1945 1950	
10	atg act aga tac tct gcc ccc cct ggg gac ccg ccc aaa cca gaa tac	7705
	Met Thr Arg Tyr Ser Ala Pro Pro Gly Asp Pro Pro Lys Pro Glu Tyr	
	1955 1960 1965	
15	gac ttg gag ttg ata aca tca tgc tcc tcc aat gtg tca gtc gcg cac	7753
	Asp Leu Glu Leu Ile Thr Ser Cys Ser Ser Asn Val Ser Val Ala His	
	1970 1975 1980	
20	gat gca tct ggc aaa agg gtg tac tat ctc acc cgt gac ccc acc acc	7801
	Asp Ala Ser Gly Lys Arg Val Tyr Tyr Leu Thr Arg Asp Pro Thr Thr	
	1985 1990 1995 2000	
25	ccc ctt gcg cgg gct gcg tgg gag aca gct aga cac act cca gtc aat	7849
	Pro Leu Ala Arg Ala Ala Trp Glu Thr Ala Arg His Thr Pro Val Asn	
	2005 2010 2015	
30	tcc tgg cta ggc aac atc atc atg tat gcg ccc acc ttg tgg gca agg	7897
	Ser Trp Leu Gly Asn Ile Ile Met Tyr Ala Pro Thr Leu Trp Ala Arg	
	2020 2025 2030	
35	atg atc ctg atg act cat ttc ttc tcc atc ctt cta gct cag gaa caa	7945
	Met Ile Leu Met Thr His Phe Phe Ser Ile Leu Leu Ala Gln Glu Gln	
	2035 2040 2045	
40	ctt gaa aaa gcc cta gat tgt cag atc tac ggg gcc tgt tac tcc att	7993
	Leu Glu Lys Ala Leu Asp Cys Gln Ile Tyr Gly Ala Cys Tyr Ser Ile	
	2050 2055 2060	
45	gag cca ctt gac cta cct cag atc att caa cga ctc cac ggc ctt agc	8041
	Glu Pro Leu Asp Leu Pro Gln Ile Ile Gln Arg Leu His Gly Leu Ser	
	2065 2070 2075 2080	
50	gca ttt tca ctc cat agt tac tct cca ggt gag atc aat agg gtg gct	8089
	Ala Phe Ser Leu His Ser Tyr Ser Pro Gly Glu Ile Asn Arg Val Ala	
	2085 2090 2095	
55	tca tgc ctc agg aaa ctt ggg gta ccg ccc ttg cga gtc tgg aga cat	8137
	Ser Cys Leu Arg Lys Leu Gly Val Pro Pro Leu Arg Val Trp Arg His	
	2100 2105 2110	
60	cgg gcc aga agt gtc cgc gct agg cta ctg tcc cag ggg ggg agg gct	8185
	Arg Ala Arg Ser Val Arg Ala Arg Leu Leu Ser Gln Gly Gly Arg Ala	
	2115 2120 2125	
65	gcc act tgt ggc aag tac ctc ttc aac tgg gca gta agg acc aag ctc	8233
	Ala Thr Cys Gly Lys Tyr Leu Phe Asn Trp Ala Val Arg Thr Lys Leu	
	2130 2135 2140	
70	aaa ctc act cca atc ccg gct gcg tcc cag ttg gat tta tcc agc tgg	8281

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Lys Leu Thr Pro Ile Pro Ala Ala Ser Gln Leu Asp Leu Ser Ser Trp
2145                2150                2155                2160

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10	ctc	tac	ggc	gta	tgg	ccg	cta	ctc	ctg	ctc	ctg	ctg	gcg	tta	cca	cca	2756
	Leu	Tyr	Gly	Val	Trp	Pro	Leu	Leu	Leu	Leu	Leu	Leu	Ala	Leu	Pro	Pro	
		790				795					800					805	
15	cga	gca	tac	gcc	atg	gac	cgg	gag	atg	gca	gca	tcg	tgc	gga	ggc	gcg	2804
	Arg	Ala	Tyr	Ala	Met	Asp	Arg	Glu	Met	Ala	Ala	Ser	Cys	Gly	Gly	Ala	
					810					815					820		
20	gtt	ttc	gta	ggg	ctg	ata	ctc	ttg	acc	ttg	tca	ccg	cac	tat	aag	ctg	2852
	Val	Phe	Val	Gly	Leu	Ile	Leu	Leu	Thr	Leu	Ser	Pro	His	Tyr	Lys	Leu	
				825					830					835			
25	ttc	ctc	gct	agg	ctc	ata	tgg	tgg	tta	caa	tat	ttt	atc	acc	agg	gcc	2900
	Phe	Leu	Ala	Arg	Leu	Ile	Trp	Trp	Leu	Gln	Tyr	Phe	Ile	Thr	Arg	Ala	
			840					845					850				
30	gag	gca	cac	ttg	caa	gtg	tgg	atc	ccc	ccc	ctc	aac	gtt	cgg	ggg	ggc	2948
	Glu	Ala	His	Leu	Gln	Val	Trp	Ile	Pro	Pro	Leu	Asn	Val	Arg	Gly	Gly	
		855					860					865					
35	cgc	gat	gcc	gtc	atc	ctc	ctc	acg	tgc	gcg	atc	cac	cca	gag	cta	atc	2996
	Arg	Asp	Ala	Val	Ile	Leu	Leu	Thr	Cys	Ala	Ile	His	Pro	Glu	Leu	Ile	
		870				875					880					885	
40	ttt	acc	atc	acc	aaa	atc	ttg	ctc	gcc	ata	ctc	ggg	cca	ctc	atg	gtg	3044
	Phe	Thr	Ile	Thr	Lys	Ile	Leu	Leu	Ala	Ile	Leu	Gly	Pro	Leu	Met	Val	
					890					895					900		
45	ctc	cag	gct	ggg	ata	acc	aaa	gtg	ccg	tac	ttc	gtg	cgc	gca	cac	ggg	3092
	Leu	Gln	Ala	Gly	Ile	Thr	Lys	Val	Pro	Tyr	Phe	Val	Arg	Ala	His	Gly	
			905						910					915			
50	ctc	att	cgt	gca	tgc	atg	ctg	gtg	cgg	aag	gtt	gct	ggg	ggg	cat	tat	3140
	Leu	Ile	Arg	Ala	Cys	Met	Leu	Val	Arg	Lys	Val	Ala	Gly	Gly	His	Tyr	
			920					925					930				
55	gtc	caa	atg	gct	ctc	atg	aag	ttg	gcc	gca	ctg	aca	ggg	acg	tac	gtt	3188
	Val	Gln	Met	Ala	Leu	Met	Lys	Leu	Ala	Ala	Leu	Thr	Gly	Thr	Tyr	Val	
		935					940					945					
60	tat	gac	cat	ctc	acc	cca	ctg	cgg	gac	tgg	gcc	cac	gcg	ggc	cta	cga	3236
	Tyr	Asp	His	Leu	Thr	Pro	Leu	Arg	Asp	Trp	Ala	His	Ala	Gly	Leu	Arg	
		950				955					960					965	
65	gac	ctt	gcg	gtg	gca	gtt	gag	ccc	gtc	gtc	ttc	tct	gat	atg	gag	acc	3284
	Asp	Leu	Ala	Val	Ala	Val	Glu	Pro	Val	Val	Phe	Ser	Asp	Met	Glu	Thr	
				970						975						980	

	aag gtt atc acc tgg ggg gca gac acc gcg gcg tgt ggg gac atc atc	3332
	Lys Val Ile Thr Trp Gly Ala Asp Thr Ala Ala Cys Gly Asp Ile Ile	
	985 990 995	
5	ttg ggc ctg ccc gtc tcc gcc cgc agg ggg agg gag ata cat ctg gga	3380
	Leu Gly Leu Pro Val Ser Ala Arg Arg Gly Arg Glu Ile His Leu Gly	
	1000 1005 1010	
10	ccg gca gac agc ctt gaa ggg cag ggg tgg cga ctc ctc gcg cct att	3428
	Pro Ala Asp Ser Leu Glu Gly Gln Gly Trp Arg Leu Leu Ala Pro Ile	
	1015 1020 1025	
15	acg gcc tac tcc caa cag acg cga ggc cta ctt ggc tgc atc atc act	3476
	Thr Ala Tyr Ser Gln Gln Thr Arg Gly Leu Leu Gly Cys Ile Ile Thr	
	1030 1035 1040 1045	
20	agc ctc aca ggc cgg gac agg aac cag gtc gag ggg gag gtc caa gtg	3524
	Ser Leu Thr Gly Arg Asp Arg Asn Gln Val Glu Gly Glu Val Gln Val	
	1050 1055 1060	
25	gtc tcc acc gca aca caa tct ttc ctg gcg acc tgc gtc aat ggc gtg	3572
	Val Ser Thr Ala Thr Gln Ser Phe Leu Ala Thr Cys Val Asn Gly Val	
	1065 1070 1075	
30	tgt tgg act gtc tat cat ggt gcc ggc tca aag acc ctt gcc ggc cca	3620
	Cys Trp Thr Val Tyr His Gly Ala Gly Ser Lys Thr Leu Ala Gly Pro	
	1080 1085 1090	
35	aag ggc cca atc acc caa atg tac acc aat gtg gac cag gac ctc gtc	3668
	Lys Gly Pro Ile Thr Gln Met Tyr Thr Asn Val Asp Gln Asp Leu Val	
	1095 1100 1105	
40	ggc tgg caa gcg ccc ccc ggg gcg cgt tcc ttg aca cca tgc acc tgc	3716
	Gly Trp Gln Ala Pro Pro Gly Ala Arg Ser Leu Thr Pro Cys Thr Cys	
	1110 1115 1120 1125	
45	ggc agc tcg gac ctt tac ttg gtc acg agg cat gcc gat gtc att ccg	3764
	Gly Ser Ser Asp Leu Tyr Leu Val Thr Arg His Ala Asp Val Ile Pro	
	1130 1135 1140	
50	gtg cgc cgg cgg ggc gac agc agg ggg agc cta ctc tcc ccc agg ccc	3812
	Val Arg Arg Arg Gly Asp Ser Arg Gly Ser Leu Leu Ser Pro Arg Pro	
	1145 1150 1155	
55	gtc tcc tac ttg aag ggc tct tcg ggc ggt cca ctg ctc tgc ccc tcg	3860
	Val Ser Tyr Leu Lys Gly Ser Ser Gly Gly Pro Leu Leu Cys Pro Ser	
	1160 1165 1170	
60	ggg cac gct gtg ggc atc ttt cgg gct gcc gtg tgc acc cga ggg gtt	3908
	Gly His Ala Val Gly Ile Phe Arg Ala Ala Val Cys Thr Arg Gly Val	
	1175 1180 1185	
65	gcg aag gcg gtg gac ttt gta ccc gtc gag tct atg gaa acc act atg	3956
	Ala Lys Ala Val Asp Phe Val Pro Val Glu Ser Met Glu Thr Thr Met	
	1190 1195 1200 1205	
70	cgg tcc ccg gtc ttc acg gac aac tcg tcc cct ccg gcc gta ccg cag	4004

	Arg	Ser	Pro	Val	Phe	Thr	Asp	Asn	Ser	Ser	Pro	Pro	Ala	Val	Pro	Gln	
					1210					1215					1220		
5	aca	ttc	cag	gtg	gcc	cat	cta	cac	gcc	cct	act	ggc	agc	ggc	aag	agc	4052
	Thr	Phe	Gln	Val	Ala	His	Leu	His	Ala	Pro	Thr	Gly	Ser	Gly	Lys	Ser	
				1225					1230					1235			
10	act	aag	gtg	ccg	gct	gcg	tat	gca	gcc	caa	ggg	tat	aag	gtg	ctt	gtc	4100
	Thr	Lys	Val	Pro	Ala	Ala	Tyr	Ala	Ala	Gln	Gly	Tyr	Lys	Val	Leu	Val	
				1240				1245					1250				
15	ctg	aac	ccg	tcc	gtc	gcc	gcc	acc	cta	ggc	ttc	ggg	gag	tat	atg	tct	4148
	Leu	Asn	Pro	Ser	Val	Ala	Ala	Thr	Leu	Gly	Phe	Gly	Ala	Tyr	Met	Ser	
				1255				1260				1265					
	aag	gca	cat	ggc	atc	gac	cct	aac	atc	aga	acc	ggg	gta	agg	acc	atc	4196
	Lys	Ala	His	Gly	Ile	Asp	Pro	Asn	Ile	Arg	Thr	Gly	Val	Arg	Thr	Ile	
						1275				1280						1285	
20	acc	acg	ggc	gcc	ccc	atc	acg	tac	tcc	acc	tat	ggc	aag	ttt	ctt	gcc	4244
	Thr	Thr	Gly	Ala	Pro	Ile	Thr	Tyr	Ser	Thr	Tyr	Gly	Lys	Phe	Leu	Ala	
					1290					1295					1300		
25	gac	ggc	ggc	tgc	tct	ggg	ggc	gcc	tat	gac	atc	ata	ata	tgt	gat	gag	4292
	Asp	Gly	Gly	Cys	Ser	Gly	Gly	Ala	Tyr	Asp	Ile	Ile	Ile	Cys	Asp	Glu	
				1305					1310					1315			
30	tgc	cac	tca	act	gac	tcg	acc	act	atc	ctg	ggc	atc	ggc	aca	gtc	ctg	4340
	Cys	His	Ser	Thr	Asp	Ser	Thr	Thr	Ile	Leu	Gly	Ile	Gly	Thr	Val	Leu	
				1320					1325				1330				
35	gac	caa	gag	gag	acg	gct	gga	gag	cga	ctc	gtc	gtg	ctc	gcc	acc	gct	4388
	Asp	Gln	Ala	Glu	Thr	Ala	Gly	Ala	Arg	Leu	Val	Val	Leu	Ala	Thr	Ala	
				1335				1340				1345					
	acg	cct	ccg	gga	tcg	gtc	acc	gtg	cca	cat	cca	aac	atc	gag	gag	gtg	4436
	Thr	Pro	Pro	Gly	Ser	Val	Thr	Val	Pro	His	Pro	Asn	Ile	Glu	Glu	Val	
						1355					1360				1365		
40	gct	ctg	tcc	agc	act	gga	gaa	atc	ccc	ttt	tat	ggc	aaa	gcc	atc	ccc	4484
	Ala	Leu	Ser	Ser	Thr	Gly	Glu	Ile	Pro	Phe	Tyr	Gly	Lys	Ala	Ile	Pro	
					1370				1375					1380			
45	atc	gag	acc	atc	aag	ggg	ggg	agg	cac	ctc	att	ttc	tgc	cat	tcc	aag	4532
	Ile	Glu	Thr	Ile	Lys	Gly	Gly	Arg	His	Leu	Ile	Phe	Cys	His	Ser	Lys	
				1385					1390					1395			
50	aag	aaa	tgt	gat	gag	ctc	gcc	gag	aag	ctg	tcc	ggc	ctc	gga	ctc	aat	4580
	Lys	Lys	Cys	Asp	Glu	Leu	Ala	Ala	Lys	Leu	Ser	Gly	Leu	Gly	Leu	Asn	
				1400				1405				1410					
55	gct	gta	gca	tat	tac	cgg	ggc	ctt	gat	gta	tcc	gtc	ata	cca	act	agc	4628
	Ala	Val	Ala	Tyr	Tyr	Arg	Gly	Leu	Asp	Val	Ser	Val	Ile	Pro	Thr	Ser	
				1415				1420				1425					
	gga	gac	gtc	att	gtc	gta	gca	acg	gac	gct	cta	atg	acg	ggc	ttt	acc	4676
	Gly	Asp	Val	Ile	Val	Val	Ala	Thr	Asp	Ala	Leu	Met	Thr	Gly	Phe	Thr	

	1430	1435	1440	1445	
5	ggc gat ttc gac tca gtg atc gac tgc aat aca tgt gtc acc cag aca Gly Asp Phe Asp Ser Val Ile Asp Cys Asn Thr Cys Val Thr Gln Thr	1450	1455	1460	4724
10	gtc gac ttc agc ctg gac ccg acc ttc acc att gag acg acg acc gtg Val Asp Phe Ser Leu Asp Pro Thr Phe Thr Ile Glu Thr Thr Thr Val	1465	1470	1475	4772
15	cca caa gac gcg gtg tca cgc tcg cag cgg cga ggc agg act ggt agg Pro Gln Asp Ala Val Ser Arg Ser Gln Arg Arg Gly Arg Thr Gly Arg	1480	1485	1490	4820
20	ggc agg atg ggc att tac agg ttt gtg act cca gga gaa cgg ccc tcg Gly Arg Met Gly Ile Tyr Arg Phe Val Thr Pro Gly Glu Arg Pro Ser	1495	1500	1505	4868
25	ggc atg ttc gat tcc tcg gtt ctg tgc gag tgc tat gac gcg ggc tgt Gly Met Phe Asp Ser Ser Val Leu Cys Glu Cys Tyr Asp Ala Gly Cys	1510	1515	1520	4916
30	gct tgg tac gag ctc acg ccc gcc gag acc tca gtt agg ttg cgg gct Ala Trp Tyr Glu Leu Thr Pro Ala Glu Thr Ser Val Arg Leu Arg Ala	1530	1535	1540	4964
35	tac cta aac aca cca ggg ttg ccc gtc tgc cag gac cat ctg gag ttc Tyr Leu Asn Thr Pro Gly Leu Pro Val Cys Gln Asp His Leu Glu Phe	1545	1550	1555	5012
40	tgg gag agc gtc ttt aca ggc ctc acc cac ata gac gcc cat ttc ttg Trp Glu Ser Val Phe Thr Gly Leu Thr His Ile Asp Ala His Phe Leu	1560	1565	1570	5060
45	tcc cag act aag cag gca gga gac aac ttc ccc tac ctg gta gca tac Ser Gln Thr Lys Gln Ala Gly Asp Asn Phe Pro Tyr Leu Val Ala Tyr	1575	1580	1585	5108
50	cag gct acg gtg tgc gcc agg gct cag gct cca cct cca tcg tgg gac Gln Ala Thr Val Cys Ala Arg Ala Gln Ala Pro Pro Pro Ser Trp Asp	1590	1595	1600	5156
55	caa atg tgg aag tgt ctc ata cgg cta aag cct acg ctg cac ggg cca Gln Met Trp Lys Cys Leu Ile Arg Leu Lys Pro Thr Leu His Gly Pro	1610	1615	1620	5204
60	acg ccc ctg ctg tat agg ctg gga gcc gtt caa aac gag gtt act acc Thr Pro Leu Leu Tyr Arg Leu Gly Ala Val Gln Asn Glu Val Thr Thr	1625	1630	1635	5252
65	aca cac ccc ata acc aaa tac atc atg gca tgc atg tcg gct gac ctg Thr His Pro Ile Thr Lys Tyr Ile Met Ala Cys Met Ser Ala Asp Leu	1640	1645	1650	5300
70	gag gtc gtc acg agc acc tgg gtg ctg gta ggc gga gtc cta gca gct Glu Val Val Thr Ser Thr Trp Val Leu Val Gly Gly Val Leu Ala Ala	1655	1660	1665	5348

	ctg gcc gcg tat tgc ctg aca aca ggc agc gtg gtc att gtg ggc agg	5396
	Leu Ala Ala Tyr Cys Leu Thr Thr Gly Ser Val Val Ile Val Gly Arg	
	1670 1675 1680 1685	
5	atc atc ttg tcc gga aag ccg gcc atc att ccc gac agg gaa gtc ctt	5444
	Ile Ile Leu Ser Gly Lys Pro Ala Ile Ile Pro Asp Arg Glu Val Leu	
	1690 1695 1700	
10	tac cgg gag ttc gat gag atg gaa gag tgc gcc tca cac ctc cct tac	5492
	Tyr Arg Glu Phe Asp Glu Met Glu Glu Cys Ala Ser His Leu Pro Tyr	
	1705 1710 1715	
15	atc gaa cag gga atg cag ctc gcc gaa caa ttc aaa cag aag gca atc	5540
	Ile Glu Gln Gly Met Gln Leu Ala Glu Gln Phe Lys Gln Lys Ala Ile	
	1720 1725 1730	
20	ggg ttg ctg caa aca gcc acc aag caa gcg gag gct gct gct ccc gtg	5588
	Gly Leu Leu Gln Thr Ala Thr Lys Gln Ala Glu Ala Ala Ala Pro Val	
	1735 1740 1745	
25	gtg gaa tcc aag tgg cgg acc ctc gaa gcc ttc tgg gcg aag cat atg	5636
	Val Glu Ser Lys Trp Arg Thr Leu Glu Ala Phe Trp Ala Lys His Met	
	1750 1755 1760 1765	
30	tgg aat ttc atc agc ggg ata caa tat tta gca ggc ttg tcc act ctg	5684
	Trp Asn Phe Ile Ser Gly Ile Gln Tyr Leu Ala Gly Leu Ser Thr Leu	
	1770 1775 1780	
35	cct ggc aac ccc gcg ata gca tca ctg atg gca ttc aca gcc tct atc	5732
	Pro Gly Asn Pro Ala Ile Ala Ser Leu Met Ala Phe Thr Ala Ser Ile	
	1785 1790 1795	
40	acc agc ccg ctc acc acc caa cat acc ctc ctg ttt aac atc ctg ggg	5780
	Thr Ser Pro Leu Thr Thr Gln His Thr Leu Leu Phe Asn Ile Leu Gly	
	1800 1805 1810	
45	gga tgg gtg gcc gcc caa ctt gct cct ccc agc gct gct tct gct ttc	5828
	Gly Trp Val Ala Ala Gln Leu Ala Pro Pro Ser Ala Ala Ser Ala Phe	
	1815 1820 1825	
50	gta ggc gcc ggc atc gct gga gcg gct gtt ggc agc ata ggc ctt ggg	5876
	Val Gly Ala Gly Ile Ala Gly Ala Ala Val Gly Ser Ile Gly Leu Gly	
	1830 1835 1840 1845	
55	aag gtg ctt gtg gat att ttg gca ggt tat gga gca ggg gtg gca ggc	5924
	Lys Val Leu Val Asp Ile Leu Ala Gly Tyr Gly Ala Gly Val Ala Gly	
	1850 1855 1860	
60	gcg ctc gtg gcc ttt aag gtc atg agc ggc gag atg ccc tcc acc gag	5972
	Ala Leu Val Ala Phe Lys Val Met Ser Gly Glu Met Pro Ser Thr Glu	
	1865 1870 1875	
65	gac ctg gtt aac cta ctc cct gct atc ctc tcc cct ggc gcc cta gtc	6020
	Asp Leu Val Asn Leu Leu Pro Ala Ile Leu Ser Pro Gly Ala Leu Val	
	1880 1885 1890	

	gtc ggg gtc gtg tgc gca gcg ata ctg cgt cgg cac gtg ggc cca ggg	6068
	Val Gly Val Val Cys Ala Ala Ile Leu Arg Arg His Val Gly Pro Gly	
	1895 1900 1905	
5	gag ggg gct gtg cag tgg atg aac cgg ctg ata gcg ttc gct tcg cgg	6116
	Glu Gly Ala Val Gln Trp Met Asn Arg Leu Ile Ala Phe Ala Ser Arg	
	1910 1915 1920 1925	
10	ggg aac cac gtc tcc ccc acg cac tat gtg cct gag agc gac gct gca	6164
	Gly Asn His Val Ser Pro Thr His Tyr Val Pro Glu Ser Asp Ala Ala	
	1930 1935 1940	
15	gca cgt gtc act cag atc ctc tct agt ctt acc atc act cag ctg ctg	6212
	Ala Arg Val Thr Gln Ile Leu Ser Ser Leu Thr Ile Thr Gln Leu Leu	
	1945 1950 1955	
20	aag agg ctt cac cag tgg atc aac gag gac tgc tcc acg cca tgc tcc	6260
	Lys Arg Leu His Gln Trp Ile Asn Glu Asp Cys Ser Thr Pro Cys Ser	
	1960 1965 1970	
25	ggc tcg tgg cta aga gat gtt tgg gat tgg ata tgc acg gtg ttg act	6308
	Gly Ser Trp Leu Arg Asp Val Trp Asp Trp Ile Cys Thr Val Leu Thr	
	1975 1980 1985	
30	gat ttc aag acc tgg ctc cag tcc aag ctc ctg ccg cga ttg ccg gga	6356
	Asp Phe Lys Thr Trp Leu Gln Ser Lys Leu Leu Pro Arg Leu Pro Gly	
	1990 1995 2000 2005	
35	gtc ccc ttc ttc tca tgt caa cgt ggg tac aag gga gtc tgg cgg ggc	6404
	Val Pro Phe Phe Ser Cys Gln Arg Gly Tyr Lys Gly Val Trp Arg Gly	
	2010 2015 2020	
40	gac ggc atc atg caa acc acc tgc cca tgt gga gca cag atc acc gga	6452
	Asp Gly Ile Met Gln Thr Thr Cys Pro Cys Gly Ala Gln Ile Thr Gly	
	2025 2030 2035	
45	cat gtg aaa aac ggt tcc atg agg atc gtg ggg cct agg acc tgt agt	6500
	His Val Lys Asn Gly Ser Met Arg Ile Val Gly Pro Arg Thr Cys Ser	
	2040 2045 2050	
50	aac acg tgg cat gga aca ttc ccc att aac gcg tac acc acg ggc ccc	6548
	Asn Thr Trp His Gly Thr Phe Pro Ile Asn Ala Tyr Thr Thr Gly Pro	
	2055 2060 2065	
55	tgc acg ccc tcc ccg gcg cca aat tat tct agg gcg ctg tgg cgg gtg	6596
	Cys Thr Pro Ser Pro Ala Pro Asn Tyr Ser Arg Ala Leu Trp Arg Val	
	2070 2075 2080 2085	
60	gct gct gag gag tac gtg gag gtt acg cgg gtg ggg gat ttc cac tac	6644
	Ala Ala Glu Glu Tyr Val Glu Val Thr Arg Val Gly Asp Phe His Tyr	
	2090 2095 2100	
65	gtg acg ggc atg acc act gac aac gta aag tgc ccg tgt cag gtt ccg	6692
	Val Thr Gly Met Thr Thr Asp Asn Val Lys Cys Pro Cys Gln Val Pro	
	2105 2110 2115	
70	gcc ccc gaa ttc ttc aca gaa gtg gat ggg gtg cgg ttg cac agg tac	6740

	Ala	Pro	Glu	Phe	Phe	Thr	Glu	Val	Asp	Gly	Val	Arg	Leu	His	Arg	Tyr	
			2120					2125					2130				
5	gct	cca	gcg	tgc	aaa	ccc	ctc	cta	cgg	gag	gag	gtc	aca	ttc	ctg	gtc	6788
	Ala	Pro	Ala	Cys	Lys	Pro	Leu	Leu	Arg	Glu	Glu	Val	Thr	Phe	Leu	Val	
		2135					2140					2145					
10	ggg	ctc	aat	caa	tac	ctg	ggt	ggg	tca	cag	ctc	cca	tgc	gag	ccc	gaa	6836
	Gly	Leu	Asn	Gln	Tyr	Leu	Val	Gly	Ser	Gln	Leu	Pro	Cys	Glu	Pro	Glu	
		2150				2155					2160					2165	
15	ccg	gac	gta	gca	gtg	ctc	act	tcc	atg	ctc	acc	gac	ccc	tcc	cac	att	6884
	Pro	Asp	Val	Ala	Val	Leu	Thr	Ser	Met	Leu	Thr	Asp	Pro	Ser	His	Ile	
					2170					2175					2180		
	acg	gcg	gag	acg	gct	aag	cgt	agg	ctg	gcc	agg	gga	tct	ccc	ccc	tcc	6932
	Thr	Ala	Glu	Thr	Ala	Lys	Arg	Arg	Leu	Ala	Arg	Gly	Ser	Pro	Pro	Ser	
				2185					2190					2195			
20	ttg	gcc	agc	tca	tca	gct	agc	cag	ctg	tct	gcg	cct	tcc	ttg	aag	gca	6980
	Leu	Ala	Ser	Ser	Ser	Ala	Ser	Gln	Leu	Ser	Ala	Pro	Ser	Leu	Lys	Ala	
			2200					2205					2210				
25	aca	tgc	act	acc	cgt	cat	gac	tcc	ccg	gac	gct	gac	ctc	atc	gag	gcc	7028
	Thr	Cys	Thr	Thr	Arg	His	Asp	Ser	Pro	Asp	Ala	Asp	Leu	Ile	Glu	Ala	
		2215					2220					2225					
30	aac	ctc	ctg	tgg	cgg	cag	gag	atg	ggc	ggg	aac	atc	acc	cgc	gtg	gag	7076
	Asn	Leu	Leu	Trp	Arg	Gln	Glu	Met	Gly	Gly	Asn	Ile	Thr	Arg	Val	Glu	
		2230				2235					2240					2245	
35	tca	gaa	aat	aag	gta	gta	att	ttg	gac	tct	ttc	gag	ccg	ctc	caa	gcg	7124
	Ser	Glu	Asn	Lys	Val	Val	Ile	Leu	Asp	Ser	Phe	Glu	Pro	Leu	Gln	Ala	
					2250					2255					2260		
	gag	gag	gat	gag	agg	gaa	gta	tcc	ggt	ccg	gcg	gag	atc	ctg	cgg	agg	7172
	Glu	Glu	Asp	Glu	Arg	Glu	Val	Ser	Val	Pro	Ala	Glu	Ile	Leu	Arg	Arg	
				2265					2270					2275			
40	tcc	agg	aaa	ttc	cct	cga	gcg	atg	ccc	ata	tgg	gca	cgc	ccg	gat	tac	7220
	Ser	Arg	Lys	Phe	Pro	Arg	Ala	Met	Pro	Ile	Trp	Ala	Arg	Pro	Asp	Tyr	
			2280					2285					2290				
45	aac	cct	cca	ctg	tta	gag	tcc	tgg	aag	gac	ccg	gac	tac	gtc	cct	cca	7268
	Asn	Pro	Pro	Leu	Leu	Glu	Ser	Trp	Lys	Asp	Pro	Asp	Tyr	Val	Pro	Pro	
		2295					2300					2305					
50	gtg	gta	cac	ggg	tgt	cca	ttg	ccg	cct	gcc	aag	gcc	cct	ccg	ata	cca	7316
	Val	Val	His	Gly	Cys	Pro	Leu	Pro	Pro	Ala	Lys	Ala	Pro	Pro	Ile	Pro	
		2310				2315				2320						2325	
	cct	cca	cgg	agg	aag	agg	acg	ggt	gtc	ctg	tca	gaa	tct	acc	gtg	tct	7364
	Pro	Pro	Arg	Arg	Lys	Arg	Thr	Val	Val	Leu	Ser	Glu	Ser	Thr	Val	Ser	
					2330					2335					2340		
55	tct	gcc	ttg	gcg	gag	ctc	gcc	aca	aag	acc	ttc	ggc	agc	tcc	gaa	tcg	7412
	Ser	Ala	Leu	Ala	Glu	Leu	Ala	Thr	Lys	Thr	Phe	Gly	Ser	Ser	Glu	Ser	

	2345	2350	2355	
5	tcg gcc gtc gac agc ggc acg gca acg gcc tct cct gac cag ccc tcc Ser Ala Val Asp Ser Gly Thr Ala Thr Ala Ser Pro Asp Gln Pro Ser 2360 2365 2370	7460		
10	gac gac ggc gac gcg gga tcc gac gtt gag tcg tac tcc tcc atg ccc Asp Asp Gly Asp Ala Gly Ser Asp Val Glu Ser Tyr Ser Ser Met Pro 2375 2380 2385	7508		
15	ccc ctt gag ggg gag ccg ggg gat ccc gat ctc agc gac ggg tct tgg Pro Leu Glu Gly Glu Pro Gly Asp Pro Asp Leu Ser Asp Gly Ser Trp 2390 2395 2400 2405	7556		
20	tct acc gta agc gag gag gct agt gag gac gtc gtc tgc tgc tcg atg Ser Thr Val Ser Glu Glu Ala Ser Glu Asp Val Val Cys Cys Ser Met 2410 2415 2420	7604		
25	tcc tac aca tgg aca ggc gcc ctg atc acg cca tgc gct gcg gag gaa Ser Tyr Thr Trp Thr Gly Ala Leu Ile Thr Pro Cys Ala Ala Glu Glu 2425 2430 2435	7652		
30	acc aag ctg ccc atc aat gca ctg agc aac tct ttg ctc cgt cac cac Thr Lys Leu Pro Ile Asn Ala Leu Ser Asn Ser Leu Leu Arg His His 2440 2445 2450	7700		
35	aac ttg gtc tat gct aca aca tct cgc agc gca agc ctg cgg cag aag Asn Leu Val Tyr Ala Thr Thr Ser Arg Ser Ala Ser Leu Arg Gln Lys 2455 2460 2465	7748		
40	aag gtc acc ttt gac aga ctg cag gtc ctg gac gac cac tac cgg gac Lys Val Thr Phe Asp Arg Leu Gln Val Leu Asp Asp His Tyr Arg Asp 2470 2475 2480 2485	7796		
45	gtg ctc aag gag atg aag gcg aag gcg tcc aca gtt aag gct aaa ctt Val Leu Lys Glu Met Lys Ala Lys Ala Ser Thr Val Lys Ala Lys Leu 2490 2495 2500	7844		
50	cta tcc gtg gag gaa gcc tgt aag ctg acg ccc cca cat tcg gcc aga Leu Ser Val Glu Glu Ala Cys Lys Leu Thr Pro Pro His Ser Ala Arg 2505 2510 2515	7892		
55	tct aaa ttt ggc tat ggg gca aag gac gtc cgg aac cta tcc agc aag Ser Lys Phe Gly Tyr Gly Ala Lys Asp Val Arg Asn Leu Ser Ser Lys 2520 2525 2530	7940		
60	gcc gtt aac cac atc cgc tcc gtg tgg aag gac ttg ctg gaa gac act Ala Val Asn His Ile Arg Ser Val Trp Lys Asp Leu Leu Glu Asp Thr 2535 2540 2545	7988		
65	gag aca cca att gac acc acc atc atg gca aaa aat gag gtt ttc tgc Glu Thr Pro Ile Asp Thr Thr Ile Met Ala Lys Asn Glu Val Phe Cys 2550 2555 2560 2565	8036		
70	gtc caa cca gag aag ggg ggc cgc aag cca gct cgc ctt atc gta ttc Val Gln Pro Glu Lys Gly Gly Arg Lys Pro Ala Arg Leu Ile Val Phe 2570 2575 2580	8084		

	cca gat ttg ggg gtt cgt gtg tgc gag aaa atg gcc ctt tac gat gtg	8132
	Pro Asp Leu Gly Val Arg Val Cys Glu Lys Met Ala Leu Tyr Asp Val	
	2585 2590 2595	
5	gtc tcc acc ctc cct cag gcc gtg atg ggc tct tca tac gga ttc caa	8180
	Val Ser Thr Leu Pro Gln Ala Val Met Gly Ser Ser Tyr Gly Phe Gln	
	2600 2605 2610	
10	tac tct cct gga cag cgg gtc gag ttc ctg gtg aat gcc tgg aaa gcg	8228
	Tyr Ser Pro Gly Gln Arg Val Glu Phe Leu Val Asn Ala Trp Lys Ala	
	2615 2620 2625	
15	aag aaa tgc cct atg ggc ttc gca tat gac acc cgc tgt ttt gac tca	8276
	Lys Lys Cys Pro Met Gly Phe Ala Tyr Asp Thr Arg Cys Phe Asp Ser	
	2630 2635 2640 2645	
20	acg gtc act gag aat gac atc cgt gtt gag gag tca atc tac caa tgt	8324
	Thr Val Thr Glu Asn Asp Ile Arg Val Glu Glu Ser Ile Tyr Gln Cys	
	2650 2655 2660	
25	tgt gac ttg gcc ccc gaa gcc aga cag gcc ata agg tcg ctc aca gag	8372
	Cys Asp Leu Ala Pro Glu Ala Arg Gln Ala Ile Arg Ser Leu Thr Glu	
	2665 2670 2675	
30	cgg ctt tac atc ggg ggc ccc ctg act aat tct aaa ggg cag aac tgc	8420
	Arg Leu Tyr Ile Gly Gly Pro Leu Thr Asn Ser Lys Gly Gln Asn Cys	
	2680 2685 2690	
35	ggc tat cgc cgg tgc cgc gcg agc ggt gta ctg acg acc agc tgc ggt	8468
	Gly Tyr Arg Arg Cys Arg Ala Ser Gly Val Leu Thr Thr Ser Cys Gly	
	2695 2700 2705	
40	aat acc ctc aca tgt tac ttg aag gcc gct gcg gcc tgt cga gct gcg	8516
	Asn Thr Leu Thr Cys Tyr Leu Lys Ala Ala Ala Ala Cys Arg Ala Ala	
	2710 2715 2720 2725	
45	aag ctc cag gac tgc acg atg ctc gta tgc gga gac gac ctt gtc gtt	8564
	Lys Leu Gln Asp Cys Thr Met Leu Val Cys Gly Asp Asp Leu Val Val	
	2730 2735 2740	
50	atc tgt gaa agc gcg ggg acc caa gag gac gag gcg agc cta cgg gcc	8612
	Ile Cys Glu Ser Ala Gly Thr Gln Glu Asp Glu Ala Ser Leu Arg Ala	
	2745 2750 2755	
55	ttc acg gag gct atg act aga tac tct gcc ccc cct ggg gac ccg ccc	8660
	Phe Thr Glu Ala Met Thr Arg Tyr Ser Ala Pro Pro Gly Asp Pro Pro	
	2760 2765 2770	
60	aaa cca gaa tac gac ttg gag ttg ata aca tca tgc tcc tcc aat gtg	8708
	Lys Pro Glu Tyr Asp Leu Glu Leu Ile Thr Ser Cys Ser Ser Asn Val	
	2775 2780 2785	
65	tca gtc gcg cac gat gca tct ggc aaa agg gtg tac tat ctc acc cgt	8756
	Ser Val Ala His Asp Ala Ser Gly Lys Arg Val Tyr Tyr Leu Thr Arg	
	2790 2795 2800 2805	

	gac ccc acc acc ccc ctt gcg cgg gct gcg tgg gag aca gct aga cac	8804
	Asp Pro Thr Thr Pro Leu Ala Arg Ala Ala Trp Glu Thr Ala Arg His	
	2810 2815 2820	
5	act cca gtc aat tcc tgg cta ggc aac atc atc atg tat gcg ccc acc	8852
	Thr Pro Val Asn Ser Trp Leu Gly Asn Ile Ile Met Tyr Ala Pro Thr	
	2825 2830 2835	
10	ttg tgg gca agg atg atc ctg atg act cat ttc ttc tcc atc ctt cta	8900
	Leu Trp Ala Arg Met Ile Leu Met Thr His Phe Phe Ser Ile Leu Leu	
	2840 2845 2850	
15	gct cag gaa caa ctt gaa aaa gcc cta gat tgt cag atc tac ggg gcc	8948
	Ala Gln Glu Gln Leu Glu Lys Ala Leu Asp Cys Gln Ile Tyr Gly Ala	
	2855 2860 2865	
20	tgt tac tcc att gag cca ctt gac cta cct cag atc att caa cga ctc	8996
	Cys Tyr Ser Ile Glu Pro Leu Asp Leu Pro Gln Ile Ile Gln Arg Leu	
	2870 2875 2880 2885	
	cat ggc ctt agc gca ttt tca ctc cat agt tac tct cca ggt gag atc	9044
	His Gly Leu Ser Ala Phe Ser Leu His Ser Tyr Ser Pro Gly Glu Ile	
	2890 2895 2900	
25	aat agg gtg gct tca tgc ctc agg aaa ctt ggg gta ccg ccc ttg cga	9092
	Asn Arg Val Ala Ser Cys Leu Arg Lys Leu Gly Val Pro Pro Leu Arg	
	2905 2910 2915	
30	gtc tgg aga cat cgg gcc aga agt gtc cgc gct agg cta ctg tcc cag	9140
	Val Trp Arg His Arg Ala Arg Ser Val Arg Ala Arg Leu Leu Ser Gln	
	2920 2925 2930	
35	ggg ggg agg gct gcc act tgt ggc aag tac ctc ttc aac tgg gca gta	9188
	Gly Gly Arg Ala Ala Thr Cys Gly Lys Tyr Leu Phe Asn Trp Ala Val	
	2935 2940 2945	
40	agg acc aag ctc aaa ctc act cca atc ccg gct gcg tcc cag ttg gat	9236
	Arg Thr Lys Leu Lys Leu Thr Pro Ile Pro Ala Ala Ser Gln Leu Asp	
	2950 2955 2960 2965	
	tta tcc agc tgg ttc gtt gct ggt tac agc ggg gga gac ata tat cac	9284
	Leu Ser Ser Trp Phe Val Ala Gly Tyr Ser Gly Gly Asp Ile Tyr His	
	2970 2975 2980	
45	agc ctg tct cgt gcc cga ccc cgc tgg ttc atg tgg tgc cta ctc cta	9332
	Ser Leu Ser Arg Ala Arg Pro Arg Trp Phe Met Trp Cys Leu Leu Leu	
	2985 2990 2995	
50	ctt tct gta ggg gta ggc atc tat cta ctc ccc aac cga tga	9374
	Leu Ser Val Gly Val Gly Ile Tyr Leu Leu Pro Asn Arg *	
	3000 3005 3010	
55	acggggagct aaacactcca ggccaatagg ccatacctgtt tttttccctt ttttttttcc	9434
	tttttttttt tttttttttt tttttttttt tttttctcctt ttttttttcc ctttttttcc	9494
	ttttctttcc tttggtggct ccatacttagc cctagtcacg gctagctgtg aaaggtccgt	9554
	gagccgcttg actgcagaga gtgctgatac tggcctctct gcagatcaag t	9605